Record -118
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01732867 DOE SHIFTS GEARS ON MRS; NEGOTIATOR CRIES 'FOUL' Nuclear Waste News December 31, 1992 V. 12 NO. 50 ISSN: 0276-2897 WORD COUNT: 1314 .

The Department of Energy has outlined a new strategy to provide interim spent fuel storage in 1998, at federal sites if necessary. DOE's handling of the announcement and its conclusion that a voluntary process for siting a monitored retrievable storage (MRS) facility has angered the Nuclear Waste Negotiator.

In a Dec. 17 letter to Senate Energy and Natural Resources Chairman J. Bennett Johnston (D-La.), Energy Secretary James Watkins presented a plan that would "enable start of spent fuel removal from nuclear plant sites and receipt at a Monitored Retrievable Storage (MRS) facility by January 1998, and start of spent fuel disposal at a repository by 2010."

The Office of the Nuclear Waste Negotiator, established under the 1987 amendments to the Nuclear Waste Policy Act, "has spent more than two years seeking a voluntary host and site for an MRS facility.... (It) has not been able to identify a viable candidate site that can be recommended to Congress by June 1993 and that will permit spent fuel receipt by January 1998," Watkins con- cluded.

Leroy: DOE Erred

The department "was factually in error in stating in the text of its policy that the Office of the Nuclear Waste Negotiator 'has not been able to identify a viable candidate site that can be rec- ommended to Congress by June 1993,'" said a Dec. 23 statement by U.S. Nuclear Negotiator David Leroy. "It remains possible that on- going talks with one or more host sites could result in negotiations and the presentation of an agreement to Congress prior to that date, as the negotiator has reported to the Clinton transition team. The Department of Energy has had continuous access to the same information in numerous briefings and frequent communications over the past two years."

Leroy said he had expressed "extreme displeasure" to both DOE Under Secretary Hugo Pomrehn to Sen. Johnston over the way the an-nouncement was handled.

The two key elements of DOE's strategy are:

A multi-purpose standardized container system: The strategy calls for development of containers that can be used for fuel receipt, storage, transport and disposal. Such a system would "reduce costs, minimize required handling of spent fuel assemblies and provide more efficient storage at both an interim storage site and nuclear plant sites," Watkins said. It would simplify design, "but would require expeditious development and certification to be effective."

A federal site: "To meet the needs and expectations of the nuclear industry, the department should plan for use of federal government sites for interim storage," Watkins said. The storage capacity for spent fuel at any federal site or sites should be made available by 1998. DOE "has prepared a generic schedule showing the actions necessary to utilize a government site or site by that time."

Congress should authorize and require the department to select candidate federal sites by Dec. 31, 1993. Congress also should require DOE to submit by Dec. 31, 1993, a detailed, specific schedule for site selection and readiness to receive spent fuel by January 1998.

DOE immediately will refocus its spent fuel container design activities to development of a standardized system with capability for receipt, dry storage, transport and disposal of spent fuel, Watkins said, adding that the proposal was endorsed by a recent resolution of the Edison Electric Institute UWASTE Committee.

The department completed an expedited schedule for developing, manufacturing, testing and certifying such a container system Dec. 15 and presented it to the Nuclear Regulatory Commission informally Dec. 17.

"Current work on MRS facility siting will be terminated and design work will be redirected toward the modular canister concept," Watkins said.

Watkins: Move Waste Fund Off Budget

DOE is recommending to Congress and the Office of Management and Budget that the Nuclear Waste Fund be taken off-budget and placed in a revolving fund. This would permit the department "to apply whatever resources are necessary to meet program needs and schedules, subject to Congressional appropriations," Watkins said.

Also, DOE will promptly explore compensation to utilities for on-site spent fuel storage costs due to potential delays in DOE's receipt of spent fuel. Such compensation would be based on payment or

credit from the Nuclear Waste Fund and on no increase in the millage fee. "If such an approach is found to be justified and practicable, the department will notify the Congress of whatever new legislation may be required in order to provide such compensa- tion," Watkins said.

Negotiator David Leroy said DOE "apparently ... also intended, but did not say, five things:

DOE continues to support fully the office of the negotiator and the MRS volunteer process. "The process has been and will remain the primary process by which the Department of Energy hopes to solve the long-term problem of the interim management of spent fuel while awaiting the opening of a repository."

The ongoing DOE-administered MRS federal grant process remains in place to provide resources to those jurisdictions that wish to study the feasibility of locating spent fuel storage facilities within their states or tribal lands on a voluntary basis.

Secretary Watkins prior assurances that no jurisdiction considering or terminating participation in the volunteer process will be singled out or targeted for involuntary hosting "remain absolute and intact."

The concept announced in the new strategy is designed only to supplement and not supersede DOE's commitment to a voluntary siting process. "The use of yet-to-be-designed universal casks at yet-to-be-designated federal facility sites is anticipated to be a stopgap measure only utilized to meet the department's commitments to accept spent fuel between January 1998 and the time when a volunteer hosted facility or other solution is licensed to operate."

Even within the directed siting strategy, DOE anticipates an active role for the negotiator in helping to address and meet concerns of governors or other officials who may be anxious about the impact of temporary spent fuel storage at federal facilities in, or fuel cask transportation through, their jurisdictions.

Edward Davis, president of the American Nuclear Energy Council, a key nuclear industry association, "welcomed DOE's efforts to keep the nuclear waste program on track by moving forward at Yucca Mountain and by planning contingency measures that will allow DOE to meet its contractual and statutory commitment to accept spent fuel by 1998."

Davis praised efforts by both John Bartlett, head of DOE's Office of Civilian Radioactive Waste Management, and Carl Gertz, director of DOE's Yucca Mountain project, for a high state of readiness and positioning the project to move forward with underground tunnelling by the end of 1993. He also complemented Watkins and DOE Under Secretary Hugo Pomrehn for grappling with the 1998 commitment issue and DOE's recognition of its commitment to the nuclear industry to store spent fuel after 1998.

More Details Expected

"We anticipate that there will be an additional communication from the department to the Congress on the high-level waste program budget and related issues before the end of the year," Davis concluded. Pomrehn is preparing a candid assessment of the high-level waste program for the incoming Clinton administration, he added.

Edison Electric Institute, an electric utility association, also praised the new strategy. "We are pleased that the Energy Department has recognized our concerns about its ability to meet the 1998 date for accepting spent fuel from utilities," said Loring Mills, EEI vice president for nuclear activities.

"We are committed to protecting the interests of our customers by ensuring that they don't have to pay twice, for both the federal disposal program and expanded on-site storage, Mills said.

Mills said either a voluntarily sited MRS or interim storage at a federal facility may be a workable solution to this problem. "The concept needs to be developed carefully with Congress and the states."

"We remain anxious to see specifics on compensation if the 1998 date is not achieved and we stand ready to discuss the details," Mills added.

Mills praised the standardized containing system, saying it "makes a great deal of sense." Finally, he agreed that "adequate and consistent program funding is necessary," and that EEI con- tinues "to support taking the Nuclear Waste Fund off budget into a revolving fund."

Record -119
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01732866 FOREIGN EXPERIENCE COULD AID U.S. REPOSITORY PROGRAM: NWTRB Nuclear Waste News December 31, 1992 V. 12 NO. 50 ISSN: 0276-2897 WORD COUNT: 691 .
Congress and the Department of Energy could learn a thing or two about managing the U.S. nuclear waste disposal program from other countries faced with the same dilemma, said the Nuclear Waste Technical Review Board. Such a review need not be extensive or expensive, but legislators and government regulators should re-examine the U.S. waste repository program from the bottom up to see if approaches taken elsewhere might be more successful than current DOE efforts.

The board made its recommendations after studying the scientific and technical programs on nuclear waste in Canada, Finland, Germany, Sweden and Switzerland.

"We believe that it is possible to meet the challenge of designing a program to manage the nation's spent fuel and defense high-level waste that is safe, efficient, and cost-effective," the board said in its December 1992 report to House Speaker Thomas Foley, Senate President Pro Tempore Robert Byrd and Energy Secretary James Watkins. DOE should concentrate on making sound scientific judgments rather than allowing the entire process to continue to be driven by artificial constraints and potentially erroneous assumptions.

Target Dates Drive Program

For example, the board said, "The DOE's target dates of 1998 (operating MRS facility), 2001 (repository construction license application), and 2010 (repository operation) are important 'givens.' These dates, in turn, influence the schedules of other decisions and perhaps some of the decisions themselves as well."

DOE plans to build and operate the MRS in a passive, volunteer state in the eastern United States. "These assumptions, however, may well not be consistent with the configuration the waste management system eventually assumes," the board pointed out.

The solution to current problems with siting the MRS (see story on p. 471) may be to think of interim storage as an integral part of any long term solution, rather than viewing it as some sort of failure that must be corrected before the program goes forward, the board suggested. If interim storage is a key component of a long-term strategy, then fears that the MRS will turn into a de facto repository could be alleviated, the board said.

Despite the fact that the U.S. research and development program is larger and more costly than that of any other nation the board studied, it does not allow DOE the utmost flexibility in applying the best available technologies to the repository program, the board said.

For example, DOE may want to consider a system that includes both natural and engineered barriers, particularly in light of the considerable resources other countries have devoted to engineered barriers. DOE also may want to develop a high-capacity, self-shielded waste package design that is compatible with multipurpose casks, the board added.

Stronger Utility Role

DOE also should consider giving nuclear utilities a strengthened role to play in ensuring the nuclear spent fuel and high-level waste management system is managed cost-effectively, the board said.

"There may be a tendency toward greater managerial and financial accountability when those responsible for financing the operation of nuclear power plants and generating spent nuclear fuel and high-level waste also are responsible for disposing of it," the board observed.

"The United States is the only country where federal law requires the federal government to enter into contracts with the nuclear utilities to accept waste for disposal by a certain date, but where responsibility for interim storage is assigned primarily to individual utilities," the board said. A broader utility role would encourage the adoption of management approaches and program procedures for cost allocation and control that minimize overhead and infrastructure costs in the R&D program.

No matter what DOE does with the repository program, the repository cannot be sited unless DOE first addresses the public's perception of the risks associated with nuclear power and nuclear waste, the board said. The public's fears have been heightened by the accidents at Three Mile Island and Chernobyl, by news reports on environmental and health hazards posed by past mismanagement of defense-related wastes in the U.S. and the former Soviet Union, and by reports on accidents that could happen at any time in Russia or Eastern Europe, the board noted. "Thus, as the technical minds move ahead, often with

sound technical solutions to difficult disposal problems, a skeptical public may not be willing to accept those solutions."

Record -120
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01731090 CONSORTIUM URGES WASTE PROGRAM REEVALUATION, FUNDING FREEZE Nuclear Waste News January 07, 1993 V. 13 NO. 1 ISSN: 0276-2897 WORD COUNT: 988 .

A consortium of nearly 90 environmental and citizen action groups has recommended President-elect Clinton set up a special White House commission to re-evaluate all U.S. radioactive waste policies. Meanwhile, "rather than throw good money after bad," most civilian radioactive waste activities should be frozen or eliminated.

"Fifty years into the development of the atomic age, U.S. policy on radioactive waste has been a dismal failure," concluded A Sustainable Energy Budget, the coalition's Dec. 30 report to the Clinton transition team. "A safe, permanent solution appears little further along than it did when the first radioactive waste was created."

The Budget report supports policies proposed in the Sustainable Energy Blueprint, a November report to the Clinton team.

None of the new low-level radioactive waste disposal facilities required by the Low-Level Radioactive Waste Policy Act, as amended, were available by the Dec. 31, 1992, deadline, said the coalition, which was led by Citizen Action, an activist group founded by Ralph Nader.

"The high-level radioactive waste program is 20 years behind schedule and, with every year, seems to fall further back," the report said.

The new presidential commission should re-evaluate all radioactive waste policies, including classification, technological options, economics, institutional framework, regulation of long-lived radioactive waste and funding re-quirements, the coalition said.

The commission should be made up of public health and environmental protection experts and "concerned members of the public" who are independent of the Department of Energy and the Nuclear Regulatory Commission. Commission members also should be "free of the financial and revitalization interests of the nuclear industry."

The solution to the radioactive waste crisis "must be a permanent means of protecting public health and safety and the environment. However, it must not be a tool for 'removing a barrier to further development of nuclear power,' as articulated in the posture statement of the Bush administration's FY'93 DOE budget request," the Budget report maintained.

Rather than waste more money on failed programs, most civilian radioactive waste activities, including the high-level waste repository program, should be frozen at current levels or eliminated. "Although savings resulting from cuts in this budget will not be available for reallocation to sustainable energy programs, they will not be wasted on indefensible projects," the report said.

Congress should index the Nuclear Waste Fund to inflation "to ensure adequate funding in the future," and the secretary of Energy should immediately raise the fee as an interim step to ac-count for inflation since establishment of the fund.

The Sustainable Energy Budget called for the Clinton administration to make the following changes in the DOE budget request:

Civilian Radioactive Waste R&D: DOE's $4.7 million civilian radioactive waste research and development budget, which is not supported from the Nuclear Waste Fund, should be dropped by $700,000 in the FY'94 budget request.

The coalition called the $700,000 proposed for elimination a "direct subsidy to dry cask vendors who want to put new reactors on the market." They added dry casks "are used by utilities to store irradiated fuel when fuel pools become full. Utilities can and should pay these costs," the report concluded.

The $4 million remaining will go to completion of a cooperative demonstration program with the Sacramento Municipal Utility District (SMUD) for a transportable storage system and spent fuel transfer for the Rancho Seco reactor, closed down in 1989.

Low-Level Radioactive Waste: DOE's $9 million request for FY'93 should be slashed by $8.4 million, resulting in a $600,000 request for FY'94.

DOE should retain the low-level waste data system and reporting responsibility, but "should require easy public access to all information." Other programs to be retained include reports to Congress and

interim storage of greater-than-Class C waste in NRC-determined emergency situations. All other programs should be suspended pending the White House commission evaluation.

Nuclear Waste Fund: Appropriations from the fund should be cut $223.796 million, from $391.976 million in FY'93 to $168.180 million in FY'94

The repository program should be cut by $107 million, leaving only enough money to permit surface characterization of the Yucca Mountain, Nev., site to continue.

The entire Monitored Retrievable Storage (MRS) program should be cut. "There is no pressing need for an MRS in the nation's radioactive waste management system. It offers the temporary illusion of a solution, but if built, is likely to become a permanent addition to the waste problem. The money is being used to design a generic MRS, yet the Nuclear Waste Negotiator is promising potential MRS volunteers that they will be able to design the facilities themselves. The procedure - design before need - was followed with the Clinch River Breeder Reactor, which was subsequently cancelled," the report said.

The groups called for an end to funding for design of transportation casks because they would not be needed in the near future. The Budget cited a congressional General Accounting Office conclusion that "the potential obstacles to developing a facility by 1998 remain formidable.... Therefore, the issues raised by the utility industry and questions about the weight of the loaded cask make it prudent for DOE to evaluate the pace and direction of the cask development program. This would allow DOE to conserve funds until there is a clear need to develop casks."

The Budget report called for a halt to cask design until a decision is made on whether to develop transport casks, dry storage casks, multiple use casks or universal casks.

Biological and Environmental Research: The coalition questioned whether the $387.7 million biological and environmental research program belongs in DOE, noting that the vast majority of the funds go to studies of radiation health effects.

"As perhaps the nation's single largest radioactive polluter, the DOE has a serious conflict of interest in also leading federal research into radiation damage. Further, DOE's Record in this area has been one of obscuring, rather than clarifying, the health effects of radiation." The program more appropriately belongs at the Department of Health and Human Services, perhaps at the Center for Disease Control.

For more information on the Sustainable Energy Budget, contact: Public Citizen, 215 Pennsylvania Ave., SE, Washington, DC 20003, (202) 546-4996, fax: (202) 547-7392.

Record -121
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01731085 EPRI REPORTS AVAILABLE Nuclear Waste News January 07, 1993 V. 13 NO. 1 ISSN: 0276-2897 WORD COUNT: 161 .

The Electric Power Research Institute (EPRI) has available the following reports. Reports are free to EPRI member utilities and affiliates, and available at the prices indicated to non-members. Contact: EPRI Distribution Center, 207 Coggins Dr., P.O. Box 23205, Pleasant Hill, CA 94523, (510) 934-4212.

Radwaste Desk Reference, Vol. 2: Transportation and Disposal, NP-7386 Final Report (RP2414-34), Vol. 2, $200. Contractor: Right Angle Industries. EPRI Project Manager: C. Hornibrook.

Interim On-Site Storage of Low-Level Waste, Vol. 1: Licensing and Regulatory Issues. TR-100298 Final Report (RP3800), Vol. 1, $200. Contractor: Newman & Holtzinger, P.C. EPRI Project Manager: C. Hornibrook.

Examination of Spent CANDU Fuel Following 27 Years of Pool Storage, TR-100674, Interim Report (RP2062-15), $200. Contractor: AECL Research. EPRI Project Manager: R. Lambert.

Proceedings: 1992 EEI/UWASTE-EPRI Workshop on At-Reactor Spent Fuel Storage, TR-100676 Proceedings (RP3290-5), $200. Con-tractor: Energy Resources International Inc. EPRI Project Manager: R. Lambert.

Borated Stainless Steel Application In Spent Fuel Storage Racks, TR-100784, Final Report (RP2813-21), $200. Contractor: Engineering Resources Inc., EPRI Project Manager: R. Lambert.

Record -122
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01721326 UTILITY REGULATORS SEEK WASTE PROGRAM OVERHAUL Nuclear Waste News December 10, 1992 V. 12 NO. 48 ISSN: 0276-2897 WORD COUNT: 653 .

The Department of Energy's high-level radioactive waste program is not working and needs a major overhaul, several public utility commissioners told a November meeting of the National Association of Regulatory Utility Commissioners (NARUC). They could not agree, however, on what needs to be done.

Pennsylvania Commissioner John Rhodes expressed the frustration of many NARUC members when he said, "Sometimes the most cost ef-fective and time efficient thing to do in an engineering project is to tear up the design and start all over.... Any time spent trying to perfect a fatally flawed plan only wastes time and money. Such is the case with Yucca Mountain."

"Unless we solve the problem of high-level nuclear waste disposal, the nuclear power industry in America is and should be in a liquidation mode," Rhodes said. He added the National Energy Strategy bill passed by the last Congress and signed into law by President Bush did nothing to solve the nuclear waste problem.

Legacy of 'Ready, Fire, Aim'

The advocates of placing the high-level waste repository at Yucca Mountain, Nev., have not helped solve the nuclear industry's dilemma, Rhodes said. "This continues the legacy of ready-fire-aim which has characterized the Yucca Mountain project from the start."

Rhodes colleague from Georgia, Public Service Commissioner Cas Robinson, said the orientation of the waste program should be changed from a deterministic approach to the probabilistic approach recommended by the National Research Council.

If the change in approach is not adopted, the program still needs to find a new path to success, Robinson told the NARUC annual meeting.

The first step is to find a site for a monitored retrievable storage (MRS) facility. "If an MRS is not sited within the next few months, it may become impossible for DOE to begin receiving spent fuel in the 1997 time frame as they are currently obligated to do."

Robinson suggested two alternatives to the current "bottoms up" approach to MRS site selection:

Use an existing DOE site or military base scheduled to be closed; or

Do the siting through privatization.

The second step is to change the repository licensing procedure. "At present, DOE is required to invest massive resources in developing a license application without any certainty of acceptance of the licensing process," Robinson said.

Robinson concluded NARUC's new Nuclear Waste Policy Office in Washington, D.C., could play an important role in moving the federal program to a new path by helping build consensus on what should be done.

DOE Defends Program Jerome Saltzman from DOE's Office of Civilian Radioactive Waste Management challenged Rhodes contention that the current program is doomed.

There have been a number of technical accomplishments since 1990, he said. They include completion of surface based tests, development of a new exploratory shaft facility design, near-com-pletion of an early site suitability evaluation, and DOE's responses to quality assurance audits and the National Academy of Sciences 1990 report.

The Nuclear Waste Negotiator has been successful in getting 24 Indian tribes and counties to obtain grants to study the feasibility of hosting an MRS, Saltzman said. One tribe has requested a phase-two grant.

NWPA, Energy Bill In Conflict?

Attorney Raymon E. Lark Jr. pointed out possible conflicts between the new National Energy Strategy and the Nuclear Waste Policy Act (NWPA), as amended.

Section 801 of the energy bill appears to displace the NWPA procedure of licensing the repository through the Nuclear Regulatory Commission while EPA develops safety requirements, Lark said. Instead, it requires the National Academy of Sciences to provide binding findings and recommendations to EPA and NRC on li-censing and safety requirements of Yucca Mountain.

Because of its federal pre-emptive aspects, this provision may need to be clarified by Congress through additional legislation, he con-cluded.

"Ultimately, resolution of the nuclear waste issue is one that should be addressed nationally. However, since the approach recently adopted by Congress is far from ideal and since the potential adverse consequences of shutdown of existing nuclear plants would be so great, state regulators should be prepared to step in to offer state and regional solutions," Lark said.

Record -123
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01693401 MRS Siting Mistakes Could Provide Future Lessons, N.Y. Panel Told Nuclear Waste News October 29, 1992 V. 12 NO. 43 ISSN: 0276-2897 WORD COUNT: 460 .

ALBANY, N.Y. -- Lack of local input, lack of power sharing with the local community and internal shortcomings at the Department of Energy contributed to the failure to site a spent fuel Monitored Retrievable Storage (MRS) facility in Tennessee six years ago -- and could contribute to future siting problems, said Elizabeth Peelle, an environmental sociologist at Oak Ridge National Laboratory.

Peelle, the keynote speaker at an Oct. 28 panel on the community's role in waste management, sponsored by the New York Energy Research and Development Authority, said DOE's siting process was flawed.

States Concerns Shortchanged

The department only negotiated with local stakeholders and failed to deal with regional and state stakeholders.

A citizens' task force was established, and though timeconsuming, was worthwhile, Peelle said. The task force's main concerns were: local control and power sharing arrangements; local input into negotiations involving local interests; the durability of the financial commitments and institutional arrangements; and strong linkages to prevent the MRS from becoming a de facto permanent repository.

Certain criteria must be met in negotiations for the outcome to be successful, Peelle said. These are: a level of trust to begin the process; the prospect of net benefit to most stakeholders; resources for an independent safety review by stakeholders; ready access to needed information; responsive, interactive relationships with the proposer, a process tailored to stakeholder concerns; economic and non-economic incentives; and limited power sharing and control.

Some aspects of the Tennessee MRS siting experience are unique because of the nature of the Oak Ridge and Roane County areas, Pelle said. However, potential nuclear or hazardous waste host areas may find useful patterns in the use of a citizens' task force, vigorous negotiations with the project sponsor to meet local concerns and conditions developed by the task force.

Independent Safety Reviews Needed

Local distrust can be decreased if stakeholders are given the power to conduct independent safety investigations, and more power sharing generally, Peelle said.

Also on the panel were: Robert Forrest, mayor of Carlsbad, N.M., home of DOE's Waste Isolation Pilot Plant; Sheri Tonn, president of Citizens for a Healthy Bay, Tacoma, Wash.; Peter Tarnawskyj, environmental manager for CECOS, Niagara Falls, N.Y.; Carolyn Ganley, chair of the citizens advisory committee for the proposed Onondaga County Resource Recovery Facility; and Sam Ratick, director for the Central for Technology at Clark University, Worcester, Mass.

For more information on the Oct. 28 panel, or others in the series on social issues affecting siting and operation of low-level radioactive waste disposal facilities, contact: New York State Energy Research and Development Authority, Two Rockefeller Plaza, Albany, NY 12223-9998, (518) 432-1406.

For information on Peelle's report, Retrospective on Lessons from 1986 Tennessee MRS Attempted Siting: The Local View, prepared under DOE Contract No. DE-AC05-84OR21400, contact: Global Environmental Studies Center, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6285.

Author: Caroline Curran

Record -124
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01693379 Utilities Lose Patience With Repository Progress Nuclear Waste News October 22, 1992 V. 12 NO. 42 ISSN: 0276-2897 WORD COUNT: 858 .

A battle is shaping up between state utility regulators and the U.S. Department of Energy over the long search for a national high-level radioactive waste repository. Some think the issue could eventually end up in court.

Regulators have fired the first shots, including accusations by the chairman of Florida's public service commission that DOE has wasted more than $3 billion collected from ratepayers since 1982 "with little or no work product resulting." And the National Association of Regulatory Utility Commissions will consider a resolution next month saying states should consider legal action to recover funds contributed to the Nuclear Waste Fund for development of a repository.

The chairman of the Florida Public Service Commission, Thomas Beard, wrote a letter dated Oct. 15 to U.S. Energy Secretary James Watkins decrying DOE's "lack of progress in providing a national site for the removal and disposal of spent nuclear fuel from commercial nuclear power plants."

Central to the issue is a part of the 1982 Nuclear Waste Policy Act requiring state utility regulators to set aside one-tenth of a cent per kilowatt hour of electricity generated by nuclear reactors and sold to the public. The money must be placed in a DOE fund earmarked for creating a national nuclear waste repository site. So far, more than $6 billion has been collected and more than $3 billion spent.

Repository Progress Slow

Regulators are upset that, while utilities have collected money from their ratepayers since 1982, DOE has run into numerous roadblocks in finding a permanent site. DOE is under a statutory obligation to begin accepting waste by 1998, but many observers think it simply will not happen that soon. Congress voted to put the repository at Yucca Mountain, Nev., but so far the state has blocked most testing of the site.

Beard and others are concerned that the state regulatory commissions are having to consider interim measures - such as above-ground dry storage - to store the spent fuel if DOE cannot accept it by 1998. That will be costly and will mean ratepayers in effect will be paying twice for an inadequate solution to the nuclear waste problem, Beard said.

William Young, assistant energy secretary for nuclear energy, said in a prepared statement that Beard's accusations that DOE has not met its responsibilities are not true.

Watkins has worked hard to assure that a safe and environmentally sound repository site is found, Young said. "(But) his efforts have been hindered throughout by narrow and politically motivated attempts to derail the entire nuclear waste program."

Steven Kraft, director of nuclear waste and transportation for the Edison Electric Institute, an association of investor-owned electric utilities, said Beard's letter and other expressions of concern reflect a frustration that both the Public Utility Commissions and the utilities share.

The Edison Institute and its members want DOE to have a site ready by the 1998 deadline, and they want the project to be done on budget, he said. "That's what the utilities and their ratepayers expect for all this money they've put into it."

NARUC Resolution Planned

NARUC's resolution comes out strongly in support of congressional legislation expediting the site characterization of Yucca Mountain by giving some federal entity the authority to grant any permits needed to determine if Yucca Mountain is an appropriate site for the repository. This position may not be easy for NARUC to take given its historic position in favor of states' rights.

But the resolution, sponsored by James McFarland of the New York State Public Service Commission, says it is in the national interest of all states, including Nevada, the potential repository host state, that ratepayers be relieved of the financial burdens caused by the delays.

The resolution, to be considered at NARUC's annual meeting next month in Los Angeles, also says if Congress does not enact legislation or if DOE continues making Nuclear Waste payments to Nevada, states would be justified in taking action to protect their ratepayers. It also says states would be justified in taking appropriate legal action to recover funds already charged.

Kraft said it is not accurate to say DOE has made no progress in finding a site. Above-ground geology work has been done, including taking air samples and soil samples and analyzing monitoring wells and bore holes.

But people are waiting for the next step, excavation of the mountain and the creation of an exploratory shaft test facility, he said. Some money has been set aside for that purpose in fiscal year 1993.

Industry representatives are hoping to sit down with DOE and devise a solution now to handle the waste if the federal government cannot take it in 1998. Industry takes the position that DOE becomes responsible for the waste regardless of whether a repository is ready. DOE has said its contractual obligation is contingent on having a facility in place.

"It doesn't help anyone to wait until 1998 (for DOE to set a policy) and have a lawsuit," he said.

It also needs to be determined what DOE's policies will be if a facility is ready to take waste in 1998 - something Kraft thinks is possible. Sites are being considered in states such as New Mexico and Mississippi for a Monitored Retrievable Storage facility that could be ready much sooner than the repository.

Record -125
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01683432 No Decision Yet On Fate Of Shoreham Spent Fuel Nuclear Waste News November 12, 1992 V. 12 NO. 45 ISSN: 0276-2897
WORD COUNT: 258 .
by Muriel King
Albany, N.Y. -- The Long-Island Power Authority (LIPA), charged with decommissioning the Shoreham nuclear power plant, has yet to make a decision on how it will dispose of the plant's radioactive fuel.
Several options are available, including indefinite storage in a holding area outside the reactor or shipment to another nuclear power plant, said LIPA Chairman Richard Kessel.
The problem is, if the radioactive fuel is sent to another nuclear plant operator, it must be processed. Estimates are running between $70 million and $80 million for the conversion.
Kessel said he would prefer to turn the fuel over to the French reprocessing firm Cogema, thereby removing responsibility for the fuel's disposal and possible regulatory oversight.
LIPA also is investigating possible sale of the fuel to Mexico for use in a 675-megawatt reactor under construction near Veracruz. The plant is scheduled to come on-line in 1993.
LIPA has held discussions with Philadelphia Electric Co., but PECO spokesman Neil McDermott described the talks as "preliminary and, at best, uncertain."
LIPA officials had expected to come to a decision about removal of the fuel and the subsequent cleanup of the plant by October, but delays have occurred because of "variable options," said Kessel. Decommissioning Shoreham, which was never operated at full power, is expected to take more than a year, and the 1994 deadline for completing the effort is approaching.
Meanwhile, the Nuclear Control Institute has filed a petition with the Nuclear Regulatory Commission seeking to bar LIPA from shipping the fuel to any overseas reprocessing plant. The NRC refused to comment, since the petition is pending.

Record -126
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01660444 Monitored Retrievable Storage Facility: Nuclear Waste News October 01, 1992 V. 12 NO. 39 ISSN: 0276-2897 WORD COUNT: 66 .

The Department of Energy has extended until March 31, 1993, the closing date for Phase 2 grants available to states, Indian tribes and local governments interested in hosting an MRS facility for interim spent fuel storage. See the Federal Register, Sept. 29, 1992, p. 44737, or contact: U.S Department of Energy, Office of Placement and Administration, Attn: Nick Graham, PR-322.1, 1000 Independence Ave. SW, Washington, DC 20585.

Record -127
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01660432 Fort St. Vrain SF Shipments Delayed For INEL Environmental Studies Nuclear Waste News September 24, 1992 V. 12 NO. 36 ISSN: 0276-2897 WORD COUNT: 248 .

The Department of Energy decided last week to delay spent fuel shipments from the closed Fort St. Vrain nuclear reactor to Idaho National Engineering Laboratory until environmental impact statements are completed for the laboratory.

"Several circumstances relating to the need to ship the fuel have recently changed." said Energy Secretary James Watkins. "Public Service of Colorado has built a storage facility for the fuel and moved the spent fuel from the reactor to the storage facility. Due to the need for new shipping casks for the spent nuclear fuel, shipment could not take place until at least 1994."

DOE also concluded changes in the fuel design for the commercial high-temperature gas-cooled reactor render the Fort St. Vrain spent fuel less valuable as a research tool than DOE had originally anticipated, Watkins said. "Because of these changes, and stringent budgetary limitations, we have concluded that there is insufficient justification to continue the $29 million program to study Fort. St. Vrain spent fuel."

Before the shipments can resume, the department plans to complete two environmental impact statements (EISs) -- a programmatic EIS for the environmental restoration and waste management program and a site EIS for waste management and environmental restoration at INEL.

Impacts of transport, receipt, storage and possible processing of Fort St. Vrain spent fuel at INEL will be analyzed in both EISs, as well as the cumulative impacts from other spent fuel management and transportation activities. Alternatives will be evaluated.

The programmatic EIS is under way. DOE expects to complete both EISs by 1995.

Record -128
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01660428 Southern Governors Urge Accelerated Characterization Of Yucca Mountain Nuclear Waste News September 24, 1992 V. 12 NO. 36 ISSN: 0276-2897 WORD COUNT: 93 .

Governors of 19 Southern states have urged accelerated characterization of the Yucca Mountain candidate high-level waste repository site as a way of alleviating the "serious depletion of spent fuel storage space" faced by nuclear power plants located in the South.

The recommendation came as part of a general energy policy resolution adopted at the Southern Governors' Association meeting in Charleston, S.C., Sept. 10-12.

The governors also concluded "the mechanism for dealing with (low-level radioactive waste) disposal is in place. The governors recognize their respective states' commitment to meet (federally) mandated deadlines for facility siting and development."

Record -129
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01621621 Pacific Nuclear Systems Inc. has been selected by Sacramento Municipal
Utility District Nuclear Waste News August 27, 1992 V. 12 NO. 35 ISSN: 0276-2897
WORD COUNT: 89 .

Pacific Nuclear Systems Inc. has been selected by Sacramento Municipal Utility District to engineer, license and fabricate spent fuel storage and transportation equipment for the Rancho Seco nuclear plant now being decommissioned. The $11 million contract includes design, licensing and fabrication of two rail-mounted transportation casks and design and fabrication of spent fuel containers for an independent spent fuel storage installation based on Pacific Nuclear's NUHOMS technology at the Rancho Seco site. Contact: Pacific Nuclear Systems Inc., 1010 South 336th St., Federal Way, WA 98003, (206) 874-2235, fax: (206) 874-2401.

Record -130
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01613924 SMUD Signs $11 Million Contract For Rancho Seco Fuel Management Nuclear Waste News July 16, 1992 V. 12 NO. 29 ISSN: 0276-2897 WORD COUNT: 212 .

Sacramento Municipal Utility District (SMUD) has selected Pacific Nuclear to engineer, license and build a spent fuel storage facility and transportation equipment for its shut-down Rancho Seco nuclear power plant in Clay Station, Calif.

Rancho Seco ceased operation after a June 1989 public referendum in which the utility's ratepayers decided the facility should be closed.

Subsequently, SMUD submitted a decommissioning plan to the Nuclear Regulatory Commission.

The SMUD board, at its July 9 meeting, authorized the district general manager to conclude negotiations and execute the $11 million contract with Pacific Nuclear.

The contract will include design, licensing and fabrication of two rail-mounted transportation casks capable of transporting spent fuel storage canisters to a Department of Energy monitored retrievable storage (MRS) facility when one becomes available in 1998.

The contract also calls for design and fabrication of containers to store the fuel in an on-site independent spent fuel storage installation until it can be shipped to an MRS facility. The on-site storage facility will be based on Pacific Nuclear's patented NUHOMS technology.

NRC'S Atomic Safety and Licensing Board held a prehearing conference in Bethesda, Md., July 14 on SMUD's decommissioning plan for Rancho Seco.

For more information on the fuel contract, contact: Michael J. Scholtens, President, Pacific Nuclear, 1010 South 336th St., Federal Way, WA 98003, (206) 874-2235, fax: (206) 874-2401.

Record -131
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01607967 NARUC Calls On Congress To Okay Full Funding Needed For Yucca Nuclear Waste News August 06, 1992 V. 12 NO. 32 ISSN: 0276-2897 WORD COUNT: 290 .

The National Association of Regulatory Utility Commissioners (NARUC) Electricity Committee's nuclear issues/waste disposal subcommittee last week readopted a resolution urging Congress to provide the funds for timely characterization of the Yucca Mountain, Nev., high-level radioactive waste repository candidate site.

The resolution was later approved without discussion by the full Electricity Committee and NARUC's executive committee during the organization's meeting last week in Seattle.

During discussions of the resolution, subcommittee members disagreed strongly over whether to add language supporting legislation now before Congress that would strip Nevada of its permitting authority over the Yucca Mountain site.

'Now Is The Time For A Bold Approach'

"There is no reason why NARUC should not take a strong position on H.R. 776," said James McFarland of New York. He agreed Nevada's rights should be respected, but argued "we have tried consensus. Now is the time for a bold approach."

Subcommittee Chairman Cas Robinson of the Georgia Public Utility Commission, said however, "for NARUC to take a position on such a state's rights issue is a problem. We have defended vigilantly the rights of the states on many issues." Robinson concluded that NARUC's "focus is on funding now. That's number one."

Nevada Public Utility Commissioner Michael Pitlock charged his state has been made the "scapegoat for the fact that the program is not working." Like Robinson, he urged NARUC to concentrate on program funding.

On-site spent fuel storage at nuclear power plants, particularly applications for dry storage facilities, presents additional problems, McFarland said.

Referring to Northern States Power Co.'s recent dry storage application before the Minnesota Public Utility Commission (NWN, July 9, 1992, p. 247), he said that, while NSP's hearing only took four weeks, "in New York, it's not going to take four weeks. In Illinois it's not going to take four weeks."

Record -132
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01595005 Spent Fuel Storage: Nuclear Waste News July 30, 1992 V. 12 NO. 31 ISSN: 0276-2897 WORD COUNT: 42 .
The Waste Management Division of the Institute of Nuclear Materials Management is developing an outline for a monograph on spent fuel storage to be published by INMM. Contact E.R. Johnson, Chairman, INMM Waste Management Division, Suite 700, 9302 Lee Highway, Fairfax, Va 22031.

Record -133
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01563978 NRC Proposes To Approve Two Dry SF Storage Casks Nuclear Waste News July 02, 1992 V. 12 NO. 27 ISSN: 0276-2897 WORD COUNT: 127 .

The Nuclear Regulatory Commission proposes to amend its regulations to approve two additional spent fuel storage casks. Transnuclear's TN-24 and Pacific Sierra Nuclear Associates' VSC-24. The casks would be added to NRC's List of Approved Spent Fuel Storage Casks, thus allowing nuclear power plant operators to use them for spent fuel storage under the general plant operating license. Comments on the proposed amendment to 10 CFR 72 are due Sept. 9 to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attn: Docketing and Service Branch.

For more information, see the Federal Register, June 26, 1992, pp. 28645-28647, or contact: Gordon E. Gundersen, Office of Nuclear Regulatory Research, NRC, Washington, DC 20555, (301) 492-3803, or James F. Schneider, Office of Nuclear Material Safety and Safeguards, NRC, Washington, DC 20555, (301) 504-2692.

Record -134
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01552805 Minnesota PUC Set To Consider NSP Dry-Cask Permit Application Nuclear Waste News June 18, 1992 V. 12 NO. 25 ISSN: 0276-2897 WORD COUNT: 162 .

The Minnesota Public Utilities Commission is expected to begin deliberations next week on whether Northern States Power should be permitted to build a dry cask storage facility for spent fuel from its Prairie Island nuclear plant near Redwing, Minn., a NSP spokeswoman told NWN last week. (NWN, April 16, 1992, p. 145).

In April, Administrative Law Judge Alan Klein recommended that NSP's application for a certificate-of-need be denied, because of fears the facility could become permanent if the federal government fails to develop a national repository.

Energy Secretary James Watkins, meanwhile, in a May 29 letter to NSP Chairman and Chief Executive Officer James Howard, outlined specific milestones DOE will meet to begin accepting waste by 1998.

Watkins also said that should the milestones not be met, "we will take whatever actions are necessary and in accordance with the law to meet our obligations under the Nuclear Waste Policy Act" to accept spent fuel in 1998. If necessary, DOE would seek "additional legislative authority," he said.

Record -135
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01552802 Range Of Safeguards Available For New Reprocessing Plants Nuclear Waste News June 18, 1992 V. 12 NO. 25 ISSN: 0276-2897 WORD COUNT: 347 .

A wide range of techniques are available for safeguarding nuclear materials at the new generation of large nuclear fuel reprocessing plants now under construction in Europe and Japan, a multinational forum on the new plants concluded last month.

The new reprocessing plants, which will begin commercial operation in the 1990s, are based on more advanced technology than the smaller commercial plants that have been operated since the 1970s. Because of the relatively large throughput of nuclear material, handling of spent fuel assemblies and plutonium storage canisters will be done automatically.

In 1987, the government of Japan provided the International Atomic Energy Agency with extrabudgetary funding for a detailed review of relevant technology for typical LArge SCAale Reprocessing plants (LASCAR) so that IAEA would have the basis for designing appropriate safeguards systems.

Information was exchanged through the LASCAR forum, a multinational working group with members from France, Germany, Japan, the United Kingdom, the United States, the Commission of the European Communities and IAEA. Participants included scientists from national laboratories, engineers from operating plants, governments experts and specialists with experience in international safeguards.

The LASCAR forum has met 19 time over the last four years, with about 30 experts present for each meeting.

The forum focused its inquiry in five areas:

- Designs of four plants in Britain, France, Germany and Japan were reviewed in terms of spent fuel storage, head-end operations, chemical processing and product storage.
- For each area, the forum considered how techniques to provide annual safeguards assurance, such as accountancy of nuclear materials and containment and surveillance measures, could be applied efficiently in a modern plant.
- Safeguards techniques were reviewed to find ways of providing more timely assurance of non-diversion of nuclear material based on more frequent examination of materials inventories.
- Areas were identified where early collaboration among IAEA, the home country and the plant operator would benefit all parties in the design and implementation of safeguards.
- Possible research and development programs to enhance safeguards implementation were identified.

The LASCAR forum report is available from: IAEA, Division of Public Information, Wagramerstrasse 5, P.O. Box 100, A-1400 Vienna, Austria, telephone: 1 2360, fax: 431 234564.

Record -136
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01552800 New York Agency Begins Shoreham Decommissioning Nuclear Waste News June 18, 1992 V. 12 NO. 25 ISSN: 0276-2897 WORD COUNT: 485 .

Decommissioning of the $5.5 billion Shoreham nuclear plant on Long Island, N.Y., began June 17. Shoreham construction was completed in the mid-1980s and low-power tests were conducted in the summer of 1985, but the plant never produced commercial power.

Long Island Power Authority (LIPA), which owns the plant, hopes to convert it to a combined cycle, gas-fired plant with a capacity between 150 and 450 MW after decommissioning of the nuclear portions of the plant are completed, Stan Klimberg, president of the Shoreham Project and LIPA general counsel, told NWN. Bids on the conversion are due July 15.

Decommissioning To Take Two Years

Decommissioning is expected to cost $186 million and will take 27 months, Klimberg said.

A maximum of 80,000 cubic feet of low-level radioactive waste, primarily steel and concrete, will be produced. LIPA hopes to reduce this amount significantly through volume reduction and selective removal of radioactive materials, such as piping. LIPA expects the LLW will go to the Barnwell disposal facility in South Carolina. Klimberg could not provide estimates of disposal costs at this time.

The 560 fuel assemblies already have been removed from the reactor and are stored in the spent fuel pool. The assemblies have a total burn-up time of two full reactor days.

LIPA is looking at three options for the fuel: selling it to another utility for use in a compatible reactor, storing it at another utility facility (either pool or dry cask), or sending it to Europe for reprocessing. LIPA has discussed purchase of the fuel with a number of utilities, Klimberg said. Also, it has discussed reprocessing options with both the French and the British. A decision on the fate of the spent fuel will be made later this year.

Robotic technologies will be used extensively during the decommissioning, he explained. The underwater disassembly of the reactor internals using remote-operated tools began June 17.

The Nuclear Regulatory Commission gave its final go-ahead for decommissioning June 11. The order (Docket No. 50-322) allowed LIPA to begin work, and gave the authority six years to remove all radioactive materials from the site.

LIPA, a state agency, took control of Shoreham from Long Island Lighting Co. (LILCO) in February as part of a 1988 agreement with New York State, under which LILCO sold the plant to the state for $1 in exchange for a guaranteed series of rate increases sufficient to cover the cost of the reactor.

Though the low-power tests were successful, local opponents had blocked emergency planning for the region surrounding the plant, thus, effectively preventing the plant from beginning commercial operations.

The New York Power Authority has been working with LIPA since 1990 and is the prime contractor for the decommissioning. A significant portion of the workforce for the decommissioning comes from LILCO, the original plant owner, Klimberg said. Now, about 875 workers -- including 280 LILCO personnel -- are on the site. This figure is expected to reach close to 1,000 during the height of the decommissioning.

Record -137
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01535493 DOE Needs to Rethink Repository Thermal-Loading Strategy -- NWTRB Nuclear Waste News June 04, 1992 V. 12 NO. 23 ISSN: 0276-2897 WORD COUNT: 459 .

The Department of Energy's thermal-loading strategy for the high-level radioactive waste repository has been developed piecemeal over the last 20 years and needs to be re-examined in a systematic way, the independent Nuclear Waste Technical Review Board recommended in its June 3 report to Congress and DOE.

The current baseline strategy assumes waste will remain at above-boiling temperatures in the repository for 300 to 1,000 years. Because DOE came by its strategy incrementally, it has no firm scientific or technical basis for its assumptions, concluded the boards's fifth report.

As a first step, the department needs to thoroughly investigate "alternative thermal-loading strategies that are not overly constrained by a desire to rapidly dispose of spent fuel. This investigation should involve a systematic analysis of the technical advantages and disadvantages associated with different thermal-loading strategies."

Also, each strategy should be assessed in terms of its possible impacts on all other elements of the waste system, the board recommended.

The technical panel called on DOE to pay special attention to areas of uncertainty, particularly those associated with the critical hypotheses for each strategy. This evaluation should be carried out with a combination of modeling; field mapping; laboratory testing; long-term, large-scale underground testing; and, if appropriate, the study of natural analogues.

DOE was cautioned to consider that lower thermal loads than those it proposes could require expansion of the repository area beyond the planned 1,520-acre site; therefore, it should take care that any tests in possible expansion areas not disqualify those areas for later use.

Board recommendations in other areas included the following:

- Geoengineering: DOE should avoid design decisions for the exploratory studies facility that would preclude possible alternative repository configurations with superior performance characteristics; develop contingency plans for reduced funding levels; and review and document the Defense Nuclear Agency's 40 years of experience with backfilling and sealing geologically contained nuclear explosions.
- Techtonic Features & Processes: DOE should give greater emphasis to seismic vulnerability studies; delay important aspects of seismic risk assessment until exploratory underground excavation is well advanced; and greatly increase emphasis on systems engineering studies.
- Engineered Barrier System: DOE should develop waste package containment goals that exceed minimum regulatory requirements; and increase funding to the engineered barrier system program before, not after, repository-level geologic data becomes available so as not to appear to be compensating for site deficiencies.
- Transportation & Systems: DOE should develop system trade-off studies to provide a firm, system-wide rationale for major decisions; and develop the necessary supporting documents for systems safety and human factors programs. Congress established the board in 1987 to provide independent, technical oversight for DOE's repository program. Its Fifth Report To The U.S. Congress and The Secretary of Energy (Stock No. 061-000-00785-7), June 3, 1992, is available for $6 from: Superintendent of Documents. Government Printing Office, Washington, DC 20402, (202) 783-3238.

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DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01535489 Environmental Coalition Recommends Long-Term Storage for HLW, LLW Nuclear Waste News June 04, 1992 V. 12 NO. 23 ISSN: 0276-2897 WORD COUNT: 208 .

A coalition of environmental and activists groups, led by the Military Production Network, has recommended delaying repository site selection until new Environmental Protection Agency disposal standards are in place and "basic scientific procedures" for nuclear waste disposal have generally been agreed upon. Also, alternative approaches such as sub-seabed disposal and transmutation, should be studied.

Reactor spent fuel and other long-lived waste should be stored on-site for up to 100 years. Dismantling of any reactor plant should be delayed for at least a 100 years "to reduce disposal requirements and risk, and anticipate delays in longer term disposal," says the coalition's report, Facing Reality: The Future of the U.S. Nuclear Weapons Complex.

All plans for new low-level radioactive waste disposal sites should be cancelled, and provisions should be made for monitored waste storage, the report continues.

Separation of long-lived elements from LLW should be studied, though the report does not say who should be responsible for the study, and provisions should be made for interim storage of hospital, pharmaceutical and research wastes.

"No siting, construction or operation of LLW facilities should be allowed without comprehensive EPA standards, and shallow burial should be banned," the authors conclude.

Facing Reality is available for $2.50 from: Nuclear Safety Campaign, 1914 North 34th St., Suite 407, Seattle, WA 98103.

Record -139
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01535488 Experts Set Guidelines For World SF Database Nuclear Waste News June 04, 1992 V. 12 NO. 23 ISSN: 0276-2897 WORD COUNT: 208 .

A group of experts from around the world are meeting this week in Vienna to develop guidelines for creation of an international database on spent nuclear fuel inventories, projections and characteristics.

The advisory committee to the International Atomic Energy Agency (IAEA) has urged establishment of the database as a tool to evaluate spent fuel arisings and storage needs, and to ensure safe and reliable spent fuel handling during medium-and long-term storage.

Information in the database will include the method of data Recording used by individual member states' national organizations, fuel design data and fuel history.

IAEA estimates that spent fuel arisings from all types of nuclear reactors in 1991 amounted to more than 9,000 metric tons of heavy metal. Projections indicate that the cumulative amount of generated spent fuel by the year 2000 may reach 200,000 metric tons of heavy metal, of which 140,000 to 150,000 metric tons will be in storage.

The IAEA advisory group is composed of experts from Belgium, Canada, Finland, France, Germany, Japan, the Republic of Korea, the Russian Federation, Spain, Sweden, Switzerland, the United Kingdom, the United States, and the Organization for Economic Cooperation and Development (OECD).

Contact: IAEA Division of Nuclear Fuel Cycle and Waste Management, P.O. Box 100, A-1400, Vienna, Austria, telephone: (43-1) 2360-1270, fax: (43-1) 234564.

Record -140
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01529357 After Heated Debate, House Strips Nevada's Yucca Permitting Rights Nuclear Waste News May 28, 1992 V. 12 NO. 22 ISSN: 0276-2897 WORD COUNT: 981 .

After a bitter floor debate, the House May 21 approved by voice vote an amendment to its Comprehensive National Energy Policy Act (H.R. 776) that would allow the Department of Energy to conduct geologic studies of a potential nuclear waste repository site at Yucca Mountain, Nev., without obtaining state environmental permits. The Senate energy bill, passed Feb. 19, contains similar language.

The amendment, included in the version of the bill approved by the House Energy Committee March 11, was deleted by the Rules Committee and did not appear in the "base text" used as a floor vehicle for the bill.

The Yucca Mountain amendment, however, was included in the Rules Committee's "two-part rule," which strictly limited the number of amendments that could be considered during floor debate. The House passed the entire energy bill May 27 by a vote of 381 to 37.

The Yucca Mountain amendment was introduced by Energy Committee Chairman John Dingell (D-Mich.), and passed on a voice vote after an intense debate over states' rights.

Dingell argued that the amendment was necessary to prevent the state of Nevada from consistently using its permitting authority to frustrate Congress' intent that the Yucca Mountain site be characterized to determine its suitability for the repository.

Only Procedural Rights Affected -- Dingell

The amendment only will deprive Nevada of its procedural rights, not its substantive rights, Dingell contended. "Substantively, Nevada will retain full enforcement authority for environmental standards contained in any permit. Procedurally, however, the amendment will allow the study process to move forward." The state, however, will be forced to enforce its substantive rights through the federal court system.

To no one's surprise, neither of the state's two representatives bought Dingell's argument. "This amendment is about one issue and one issue only -- states' rights," said Rep. Barbara F. Vucanovich (R-Nev.).

She pointed out that, "In New Mexico, DOE is attempting to open the Waste Isolation Pilot Project, or WIPP site, However, a federal judge has ruled that DOE must obtain a state-issued RCRA (Resource Conservation and Recovery Act) permit prior to waste implacement. Will we soon see a bill before the House stripping New Mexico's authority to issue this permit?"

Rep. Craig Thomas (R-Wyo.), whose state has expressed possible interest in the Monitored Retrievable Storage (MRS) facility, echoed Vucanovich's argument. He stressed that, while he favors the continued vitality of the nuclear industry, he also is committed to states' rights.

"In Wyoming, (we) are studying and considering an intermediate storage site. ... If the congress says to Nevada today, 'We are going to do it. You guys get out of the way, we are not going to pay any attention to what you have in mind in terms of permitting,' they can say that the next time to Wyoming," Thomas said.

"The siting of the nation's high-level nuclear waste repository is no longer a scientific process," Vucanovich maintained. "The 1987 action of Congress naming Yucca Mountain as the only site to be characterized wholly politicized the process."

'Screw Nevada Bill' No. 2 -- Bilbray

Nevada's other House member, Rep. James H. Bilbray (D) was even stronger in his criticism. He called the Dingell amendment "the 'Screw Nevada Bill' No. 2," referring to the state's popular name for the earlier 1987 Nuclear Waste Policy Amendments Act.

He charged Congress with hypocrisy. "Over and over again courts have held at different times that the procedural rights of protest in permitting was not entitled to the states, and Congress has come in and passed law after law saying that not only is the substantive right of the state to be considered, but also the procedural rights."

Bilbray asked his colleagues if they would like to have the nuclear repository. "Nevada will give up this great public works project to them willingly and allow all those jobs to flow to them," he said.

"In talking to members of the Committee on Energy and Commerce, many of them admit they disagree with what the chairman is doing, but out of respect or fear they will support the chairman in this particular action," Bilbray contended.

Rep. John Rhodes (R-Ariz.) reluctantly supported the Dingell amendment, in spite of his expressed concerns with the states' rights issue.

"We are dealing with the implementation of national policy," Rhodes said. "That national policy is that the United States of America will take the responsibility of providing a permanent repository for high-level nuclear waste. It is also our national policy to provide a single site to be characterized as a suitable location for that repository. No single state can be allowed to circumvent stated national policy."

Superfund Model

Rep. Bill Brewster (D-Okla.), who also supported the Dingell amendment, compared it to the Superfund legislation. "The language included in H.R. 776 is modeled after 1986 Superfund hazardous waste cleanup legislation, which also dealt with the issue of states refusing to cooperate in the selection of disposal sites," he explained.

Rep. Claude Harris (D-Ala.) also used the Superfund analogy. "The Superfund bill gave the Environmental Protection Agency the right to proceed with cleanup without state agreement. ... It is clear under Superfund, Congress determined that when a program represents the environmentally preferred solution to an existing environmental program, that program requires special procedures to ensure its goals can be accomplished in a timely fashion. ... Similarly, Congress determined that deep geologic isolation was the environmentally preferred solution for the disposal of spent nuclear fuel by adopting the Nuclear Waste Policy Act of 1982."

Shortly after the House vote, Energy Secretary James Watkins issued a statement lauding the Dingell amendment.

The amendment "allows DOE to pursue site characterization activities at the candidate nuclear waste repository site at Yucca Mountain, Nev.," Watkins said. "By bringing a halt to the legal impediments raised by the state of Nevada, DOE now can complete its work assessing the suitability of the proposed site."

He concluded that the Yucca Mountain amendment "combined with the Clement-Barton amendment (that simplified nuclear plant licensing) ... will allow nuclear power to help meet America's future electricity needs."

Record -141
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01529356 Negotiator's Office Extended; Decommissioning Scheme Set Up Nuclear Waste News May 28, 1992 V. 12 NO. 22 ISSN: 0276-2897 WORD COUNT: 698 .

The Nuclear Waste Negotiator's Office will be extended for three years by an amendment to the Comprehensive National Energy Policy Act (H.R. 776), passed by the House May 27 by a vote of 263-135. The bill also sets up a scheme for decommissioning the Department of Energy's uranium fuel processing plants.

The amendment extending the term of the Negotiator's Office, offered by Nevada's two House members, Reps. Barbara F. Vucanovich (R) and James Bilbray (D), passed May 21 on the heels of a controversial amendment stripping Nevada of environmental permitting authority over the Yucca Mountain repository candidate site (see story p. 195).

In introducing the amendment, Vucanovich said the office "represents a historic change in the way that government determines the location of controversial facilities and, if successful, may well offer a model for future siting of prisons, halfway houses, solid waste dumps and other unpopular facilities. ... The volunteer option available through the nuclear waste negotiator offers an alternative. We should not put an end to this promising initiative before it has a chance to prove itself."

Negotiator Confirmed In Late 1990

She also pointed out that, while the office was created by the 1987 Nuclear Waste Policy Amendments Act, a negotiator was not nominated and con firmed by the Senate until August 1990.

"In less than two years since taking office, Mr. (David) Leroy has accepted 19 applications from jurisdictions around the country who are interested in being considered for location of a temporary storage facility. One of these jurisdictions is interested in becoming the host to the permanent storage facility." Vucanovich called the negotiator's office the only means the government has of meeting its obligation to begin accepting spent fuel from nuclear utilities in 1998.

The "value of voluntary siting in the case of hazardous or other more undesirable facilities is self evident by the previous amendment, the 'Screw Nevada II to the Wall' amendment, Bilbray said, adding that "the preemption legislation is an indication of a failed policy."

The energy bill includes a four-way deal worked out by the Ways and Means, Energy, Interior and Science committee that would require the federal government and nuclear utilities to share the cost of cleaning up the Department of Energy's three aging gaseous diffusion plants for uranium enrichment.

The House energy bill, like its Senate counterpart passed in March, includes provision for creating a federally owned corporation to take over the Department of Energy's uranium enrichment program. The goal is for the federal government to put the enterprise on a sound financial footing, and then sell it to private investors.

The agreement would relieve the new corporation of direct responsibility for cleanup of the present generation of uranium enrichment plants, estimated to cost $20 billion over 40 years. Instead, costs would be split between the federal government and the nuclear utilities. Contributions to the cleanup fund would total $500 million a year, indexed to inflation.

Feds To Pay 60 Percent of Cleanup Costs

The federal government, which was alone in its use of the enriched uranium for 20 years, will pay about 69 percent of the cleanup costs through annual appropriations. The utilities, which have purchased fuel from DOE for commercial reactors since 1969, would assume 31 percent of the cleanup costs.

The utility share of the costs, however, would be capped at $2.5 billion, and could not be collected for at least 15 years. Individual nuclear utilities' fees would be based on the amount of enriched uranium they had purchased from DOE over the years. The federal government also would be authorized to negotiate with foreign entities that have bought uranium from the United States to obtain contributions to the cleanup fund.

An amendment by Rep. Sam Gejdenson (D-Conn.) that would have required the Nuclear Regulatory Commission to establish new, stricter standards for selecting sites for low-level radioactive waste disposal facilities failed by a vote of 117 to 293.

At the last minute, Energy Committee Chairman John Dingell (D-Mich.) withdrew an amendment, included in the Energy Committee version of the bill, that would have required the monitored retrievable storage (MRS) facility be located as close to the permanent repository as possible. For all

practical purposes, this would have designated Nevada as the candidate state for both the repository and the MRS.

Record -142
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01518542 OCRWM Official Urges Generic Resolution of Cask Issues Nuclear Waste News May 21, 1992 V. 12 NO. 21 ISSN: 0276-2897 WORD COUNT: 322 .

Cask designers would have "a new tool on the shelf" and the Nuclear Regulatory Commission would work more efficiently if the commission allowed some materials issues to be resolved independent of the cask certification process, according to an official in the Office of Civilian Radioactive Waste Management.

William Lake, a mechanical engineer in OCRWM's transportation branch, presented his conclusion in a paper submitted to last month's 3rd International Conference on High-Level Radioactive Waste Management. If the certification process was refined "we could pursue topical design and materials issues prior to actually going into cask design activity," he told NWN.

Also, NRC would not spend time reviewing designs for casks that would never be built. Currently, most technical issues are resolved at the NRC through the certification process, which provides an extensive safety review, he said.

NRC has already reviewed two other issues -- burnup credits and source term evaluation -- separately from cask certification, he said. "But even in those two areas they have only gone so far then switched it back to a cask application."

Westinghouse Proposed Cask Changes

The latest push for modifying the review process began after Westinghouse proposed substituting a titanium alloy for stainless steel in the shell of a spent fuel cask to be carried by truck. Using the lighter titanium would have boosted the cask's capacity by about 50 percent, Lake said. OCRWM revised its original contract with Westinghouse to incorporate the new suggestion, but eventually dropped the company's proposal altogether.

However, OCRWM realized that the flexibility gained in a switch of procedures would allow it and cask designers to focus on generic technical and regulatory issues without "going down the design path," which is much more expensive and involves more complex cask analysis and scale model testing.

Although the reform has the potential to save time and money, it would not be appropriate in every instance, Lake said. "The choice of a given material is generic but how it is applied is design-specific."

Record -143
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01518539 HLW Systems Analysis Would Be Useful, But Complex -- ACNW Nuclear Waste News May 21, 1992 V. 12 NO. 21 ISSN: 0276-2897 WORD COUNT: 486 .

A Nuclear Regulatory Commission systems analysis of the high-level radioactive waste management and disposal system would be useful, but it also would be extremely complex and would require a considerable effort on the commission's part, NRC's Advisory Committee on Nuclear Waste (ACNW) has concluded.

A systems analysis for individual components of the HLW system, much less the entire program, would encompass a large range of dimensions, many of which are, as yet, unidentified, ACNW Chairman Dade Moeller said in a May 1 letter to NRC Chairman Ivan Selin.

The difficulties result from: the number and complexities of disciplines involved; the absence of firm reference designs for the repository systems; the lack of a firm decision about the site being investigated; and the limited experiences of the sciences and technologies in describing, with precision, the performance of related systems, both natural and man-made, over prolonged time periods.

Among the panel's findings are:

- Since one of the beneficial aspects of systems analysis is identification of interfaces that may not be adequately addressed or coordinated, ACNW noted that "the current activities in HLW disposal largely fail to address the question of contingencies. Since it is not ensured that the Yucca Mountain site will prove to be suitable, or that the MRS can be located and constructed/operated on a timely basis, the DOE and the NRC may be faced with a schedule for accepting and managing HLW, especially spent fuel, that is not in accord with the completion of functional storage or disposal systems."
- Satisfactory resolution of technical issues is necessary, but not sufficient, to ensure that HLW can be safely placed in a repository. Although public perceptions are normally outside the scope of ACNW activities, "we believe that a systems analysis would focus quickly and emphatically on this aspect as being one that could be as debilitating as the discovery of a substantial flaw in the quality of the candidate site."
- Interim storage, such as that provided by a monitored retrievable storage facility, for periods that reduce the heat pulse from HLW may be identified in a systems analysis as a desirable alternative not actively being considered.
- Unless techniques are found to evaluate the likelihood of major impacts from human intrusion, either through systems analysis or otherwise, "this problem will remain as a dominant challenge in meeting the pertinent standards and regulations."
- NRC's subsystems criteria may not mesh with the Environmental Protection Agency's standards. "Even though EPA standards are not final, we believe that a systems analysis of the performance of the HLW in a repository would show discrepancies that may not be easily resolvable," Moeller's letter said.

ACNW concluded that, given on-going activities of the NRC and DOE staffs, immediate NRC initiation of a separate, comprehensive systems analysis of the entire HLW management and disposal system would be premature. "In our opinion, the better course of action would be to await the results of these ongoing efforts" and then determine what is needed.

Record -144
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01518535 The Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste
(ACNW) Nuclear Waste News May 21, 1992 V. 12 NO. 21 ISSN: 0276-2897 WORD COUNT: 877 .

- The Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste (ACNW) "strongly endorsed" the objectives of the commission's "Procedures and Criteria for On-Site Storage of Low-Level Radioactive Waste" in an April 30 letter from ACNW Chairman Dade Moeller to NRC Chairman Ivan Selin. ACNW, however, called on the commission to "clearly indicate to potential host states that this regulatory effort not be interpreted as a retreat by the commission from its well-established position that long-term storage of LLW is not an acceptable substitute for disposal." Also, the ACNE expressed concern for the period from 1993 to 1996, noting that all existing LLW disposal sites, except Hanford, may close at the end of 1992. "If this becomes a reality, interim storage of LLW will become necessary." The letter went on to recommend that NRC and agreement state inspectors "be encouraged to follow such operations closely, being especially alert to note any possible indications of unsafe conditions and operations." It also called on the NRC staff to pay particular attention to the impact on small waste generators, such as hospitals, universities and research laboratories.

- The Department of Energy has turned the tables on an activist medical group that charged in a May 7 report (NWN, April 30, 1992, p. 163) that DOE's radiation epidemiology program is seriously flawed, and called on the Physicians for Social Responsibility to submit its own epidemiology study to peer review. Paul Ziemer, DOE assistant secretary for environment, safety and health, said he could not comment on Dead Reckoning: A Critical Review of the Department of Energy's Epidemiologic Studies because the group refused to share its data with DOE.

- The Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste (ACNW) will meet May 28-29 in Bethesda, Md. The agenda includes: a possible rulemaking for a controlled-use area/design-basis accident dose limit for operation of a high-level radioactive waste repository; proposed changes to 10 CFR 72 concerning emergency planning for independent spent fuel storage installations and monitored retrievable storage facilities; a request from NRC Chairman Ivan Selin for an outline for a full systems analysis of the overall high-level waste management and disposal program; a briefing on topics discussed at the 24th annual meeting of the Conference of State Radiation Control Program Directors; and a briefing on the Environmental Protection Agency's adoption of a revised hazard ranking system to assess the threat associated with the environmental release or potential release of hazardous chemical and/or radioactive materials. Contact: Executive Director, ACNW, NRC, Washington, DC 20555, (301) 492-4516.

- The hazardous waste management division in Lawrence Livermore National Laboratory's environmental protection department has begun publishing Waste Matters, a new bulletin to provide waste generators with information about proper handling and accounting procedures. The May issue, the first to be published, includes features on: requirements for certifying that waste being sent for disposal is free of added radioactivity; how to describe waste on requisition forms; and proper verification and reverification. The bulletin will appear on an "as-needed basis," rather than on a regular schedule, said division leader Keith Gilbert.

- The National Association of Regulatory Utility Commissioners (NARUC) will hold its summer committee meetings July 26-30 in Seattle. NARUC's electricity subcommittee on nuclear issues - waste disposal will meet at that time. Contact: Paul Rodgers, Administrative Director, P.O. Box 684, Washington, DC 20044-0684, (202) 898-2200, fax: (202) 898-2213.

- The Nuclear Regulatory Commission is setting up an Atomic Safety and Licensing Board to rule on petitions to intervene and/or requests for hearings on the decommissioning plan for Rancho Seco submitted by the Sacramento Municipal Utility District (Docket No. 50-312-DCOM; ASLBP No. 92-663-02-DCOM). The board will preside over the hearing if one is ordered. See the Federal Register, May 20, 1992, p. 21433.

- The Nuclear Regulatory Commission has issued IMPACTS-BRC, Version 2.1, Code and Data Verification, NUREG/CR-5797. The document describes the code history and quality assurance work carried out on IMPACTS-BRC, a computer program to calculate the radiological doses (impacts) from handling, recycling, incineration and disposal of very-low-level radioactive waste. NRC developed

the code to support the review of petitions to exempt certain waste streams from licensed disposal. See Federal Register, May 18, 1992, p. 21139. Copies of the report are available for purchase from: Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082, or National Technical Information Service, Springfield, VA 22161. Copies of the software may be obtained from: Energy Science and Technology Software Center, P.O. Box 1020, Oak Ridge, TN 37831.

- The Nuclear Regulatory Commission proposes to extend until Jan. 1, 1994 the implementation date for its revised radiation protection standard (10 CFR 20.1001-20.2401, and appendices). This extension would provide licensees additional time to examine and implement the regulatory guidance being developed to support the rule and would establish a concurrent implementation date for NRC licensees and Agreement State licensees by eliminating the one-year period during which agreement states could continue to enforce the existing Part 20 while NRC would be enforcing the revised standard. Comments are due June 18 to: Secretary, NRC, Washington, DC 20555, Attn: Docketing and Service Branch. For more information, see the Federal Register, May 19, 1992, pp. 21216-21218, or contact: Donald A. Cool, Chief, Radiation Protection and Health Effects Branch, Division of Regulatory Applications, Office of Nuclear Regulatory Research, NRC, Washington, DC 20555, (301) 492-3785.

Record -145
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01518505 Three Trends Critical To Rail Use For Radwaste Transport Nuclear Waste News May 14, 1992 V. 12 NO. 20 ISSN: 0276-2897 WORD COUNT: 444 .

Three major trends will influence the Office of Civilian Radioactive Waste Management's ability to use railroads to carry spent nuclear fuel and high-level radioactive wastes in the future: track abandonments, potential for contract agreements to set service and rates, and growth in short-line railroads, concludes Ruth Maddigan from Science Applications International Corp. (SAIC) Oak Ridge, Tenn.

The availability of feeder lines from nuclear reactors is the key issue for OCRWM because rail transportation is generally the preferred mode since rail casks can accommodate significantly larger volumes of spent nuclear fuel in a single shipment, said a paper authored by Maddigan, and presented at last month's 3rd International Conference on High-Level Radioactive Waste Management by her associate at SAIC, Charles Hill.

Shadowing the use of railways, though, is the possibility of using longer combination vehicles (LCVs), trucks that weigh up to 67 tons, considerably more than the standard limit of 40 tons. Congress has ordered studies on the handling characteristics and safety of LCVs. The Federal Highway Administration is developing a list of what kind of LCV each state allows.

LCVs assume importance because some reactors are not located on a rail line or are located on one that is unable to provide transport service. In general, trucking benefited from the rail abandonments by Class I railroads that have totaled thousands of miles of track since the rail industry was deregulated in the 1980s. Most shippers turned to trucks as an alternative, but "the average cost increase for these shippers was 19 percent," Maddigan said.

A legislative solution to abandonments and subsequent higher costs for shippers is available, however, and it is linked to lowering the railroads' cost of labor benefits, Maddigan said.

If Congress established lower labor payments (for employer liability and unemployment insurance) while still encouraging development of new short-line railroads "more miles of track would be sold to fledgling firms rather than being abandoned," Maddigan argued.

ICC May Step In

The paper also noted that in 1990 approximately 60 percent of all rail traffic was governed by contract rates, and when i comes to setting rates for radioactive cargo, and Interstate Commerce Commission has maintained control even though it has faced legal challenges. The ICC has indicated it will attempt to arrive at a methodology for determining reasonable rates for radioactive shipments.

Also, the ICC could be in a position to medicate negotiations between the railroads and the Department of Energy. "Such oversight would probably mean that railroads would not be able to charge as much as if the negotiations for the development of a contract had been private and independent of the ICC," said Maddigan.

Contact: Ruth Maddigan, SAIC, P.O. Box 2501, 301 Laboratory Rd., Oak Ridge, TN. 37831, (615) 481-2925.

Record -146
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01481965 The Materials Research Society has published Scientific Basis for Nuclear
Waste Management XV, the latest in its series of proceedings covering
the technical basis of nuclear waste management. Nuclear Waste News April 23, 1992 V. 12 NO. 17 ISSN: 0276-2897 WORD COUNT: 85 .
The 766-page book contains 89 papers from the 15th International Symposium on Nuclear Waste Management, held during the European Materials Research Society in Strasbourg, France. It covers glass leaching mechanisms, glass environment interactions, glass properties, ceramics, actinide chemistry, spent fuel, canisters, natural analogues, buffer and backfill materials, flow and transport in the repository environment, and the repository. Copies are available for $60 ($52 for MRS members and $68 outside the U.S.) from: Materials Research Society, Publications Department, 9800 McKnight Rd., Pittsburgh, Pa. 15237, 412/367-3012, fax: 412/367-4373.

Record -147
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01468790 DOE Takes Pounding At Hearing On Repository Program Status Nuclear Waste News April 02, 1992 V. 12 NO. 14 ISSN: 0276-2897 WORD COUNT: 855 .

Serious doubts about the future of the Department of Energy's Yucca Mountain project were aired on Capitol Hill this week, as members of the Senate Energy Committee questioned the project's ever-changing timetable and spiralling cost estimates.

"Something is fundamentally wrong, in the view of this layman, with respect to this program," Committee Chairman J. Bennett Johnston (D-La.) said in opening remarks at a March 31 hearing. The hearing was held to determine "how we can get this program back on track, or ... to justify how it is that we can be a billion dollars into the program and not even have a hole" drug at the Nevada site, Johnston said.

DOE estimates it will cost $6 billion to complete a license application for the repository, then another $2 billion to actually build it, said John Bartlett, head of DOE's Office of Civilian Radioactive Waste Management (OCRWM).

Domenici Suggests Ending Program

Bartlett and his colleagues took heat from all sides, as criticism ranged from Sen. Paul Wellstone (D-Minn) wondering whether the program was "all a myth," to Sen. Pete Domenici (R-N.M.) going so far as to suggest putting an end to the decade-long endeavor.

"Frankly I am not at all convinced that we should proceed with this project. In fact, I think maybe we are about to set upon a course to spend $6 billion and be nowhere," Domenici said, adding that he would favor "a major American program in transmutation," which likely would not "come anywhere close to this cost."

Similar frustration was voiced by Sen. Larry Craig (R-Idaho), who came up with the novel idea of building the repository first, then testing it. "My logic says that if it costs $6 billion to do site characterization and $2 billion to build it, build it and then test it. If it doesn't work, close the door and go to something else."

Bartlett said the costs and schedules of the program were "being driven by compliance" with more than 2,500 regulatory requirements set by the Environmental Protection Agency and the Nuclear Regulatory Commission. The other major factor, he said, was the complexity of the site.

"It's not a monolith. ... It's a very complicated geology that has a very complicated history (and it) has to be characterized well enough so you have defensible information in this licensing arena," he said.

Asked if the regulatory requirements were unreasonable, Bartlett stopped short of saying yes, but did characterize EPA standards as "a factor of a million, roughly, more stringent than all the other standards we humans normally accept for protection of public safety."

Sen. Malcolm Wallop (R-Wyo). agreed, saying EPA, "alone amongst the government agencies of the world ... has developed the idea that there is some sort of perfect guarantee available for 10,000 years," referring to the requirement that the repository isolate waste from the environment for that time.

Wellstone countered that the importance of regulating radioactivity should not be belittled, and called for an objective study of project costs, asking Bartlett for "a list of every cost that you deem unnecessary because of EPA regulations," and a total cost projection.

Don Deere, chairman of the Nuclear Waste Technical Review Board, an independent scientific panel established by Congress to oversee technical issues involving the Yucca Mountain project, reported that the project was basically well managed, but hampered by regulatory constraints and recent budget cuts.

More Money Needed

Deere cited a $30 million reduction in funds appropriated by Congress for Fiscal Year 1992, and called for "substantial increases" over the $182 million allocated for site characterization. Without "sufficient and predictable long-term funding," Deere said, "Congress and the secretary of Energy should anticipate unavoidable slippage in the repository development schedule."

Deere's concerns were echoed by several representatives of the nuclear utility industry, who urged the panel to free the Nuclear Waste Fund -- which pays for the project entirely from a utility surcharge on nuclear-generated electricity -- from the rest of the federal budget. Johnston agreed that this was necessary and promised to introduce legislation this year.

John Kauffman, chairman of the board and CEO at Pennsylvania Power and Light Co., also called for scrutiny of waste program expenditures.

"In order to determine if American ratepayers are getting their money's worth for expenditures by the DOE program, there needs to be additional improvement in the OCRWM management program," Kauffman said. "The industry needs to be able to guarantee to our (ratepayers) that DOE's expenditures on this program are sound and therefore utility payments supporting the program are prudent."

The committee also heard from Krista Sanda of the Minnesota Department of Public Service, who warned that her state is "a small example of everything that's happening" as a result of delays at Yucca Mountain. Specifically, she pointed to the Prairie Island nuclear power plant, which plans to build a dry cask storage facility because it is rapidly running out of space in its fuel pool for spent fuel.

"You are looking at a state that's probably going to become a de facto MRS," she said, referring to DOE's plans to build a monitored retrievable storage facility for spent fuel prior to completion of a permanent repository. "Unless substantial progress is made by DOE, more will follow," she said.

Record -148
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01468777 British Nuclear Fuels has completed its new thermal oxide reprocessing
plant Nuclear Waste News April 02, 1992 V. 12 NO. 14 ISSN: 0276-2897 WORD COUNT: 62 .
- British Nuclear Fuels has completed its new thermal oxide reprocessing plant (THORP) at Sellafield. Over its first 10 years in operation, it will process 7,000 tons of spent fuel from 30 clients in nine states. Over 5,000 tons is already stored at the site in cooling ponds. THORP has orders for 40 percent of its second 10 years of operation.
Author: Judith Perera

Record -149
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01468763 Congressman Entertains Shipping U.S. Nuclear Waste to Russia Nuclear Waste News March 26, 1992 V. 12 NO. 13 ISSN: 0276-2897 WORD COUNT: 600 .

Sen. James Exon (D-Neb.) March 24 prodded a top Energy Department official to consider the idea of exporting U.S. nuclear waste to the former Soviet Union as a solution to the thorny waste disposal problem.

"I'd like the opportunity to consider shipping low-level waste set for Nebraska elsewhere. Selfish? Yes," said Exon, who chairs the Senate Arms Services strategic forces and nuclear deterrence subcommittee. Nebraska is the host state for Central Compact's low-level waste facility.

Exon said he had recently visited nuclear waste disposal and recycling facilities in the former Soviet Union and noted that Energy Secretary James Watkins has recently entered into a memorandum of understanding with Russia. He suggested to Assistant Secretary of Energy Leo Duffy that some agreement might be considered between the two countries under which the cash-starved Russian republic could handle the United State's unwanted spent nuclear fuel and low-level nuclear waste.

"Given the fact that the Soviets seem for economic reasons to be offering to put their people to work (making nuclear waste pellets) ... is there any thought being given to a cooperative storage effort?" Exon asked Duffy.

The former Soviet Union has "vast expanses of land," much of it desolate, where U.S. waste could be buried, Exon suggested. "Have you or your department ever considered exporting the waste?" he pressed Duffy.

"Our technology is better than anyone's. I don't think we should transfer our nuclear waste to anyone in the world," Duffy responded.

Exon countered that Duffy was displaying "some kind of 'Ugly American' attitude" in assuming that U.S. technology for handling radioactive waste was superior the that of the Russians. "The Soviet Union was the first nation to put a man in space," he noted. But he acknowledged that their handling of radioactive waste, which has included draining nuclear waste directly into lakes, "shows we shouldn't trust them in these areas in the future."

Duffy stated that even if the Russians were to develop improved technologies for handling nuclear waste, shipping U.S. waste there "is not an ethical thing to do."

Sen Jeff Bingaman (D-N.M) also asked Duffy to consider whether "handling nuclear waste is an area where there is an opportunity for cooperation with the (former) Soviet Union."

"Can they (the Russians) do it cheaper? Yes," Duffy responded. "Can they handle it (nuclear waste) better? The answer is 'no.'"

Exon Seeks Opinion on Basel Convention

Exon asked Duffy whether exporting radioactive waste to the Soviets would be "consistent with the Basel convention." He asked the Assistant Secretary to provide the Senate with a future written response for the Record, on whether the Senate should ratify the treaty.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in March 1989 by a U.N.-sponsored conference of 116 nations in Basel, Switzerland. The Senate Foreign Relations Committee held a hearing last week to review everal bills that have been introduced in Congress to implement the treaty, should the United States ratify it.

Sen. Strom Thurmond (R-S.C.) suggested the United States should stop spending money on nuclear waste projects like the Waste Isolation Pilot Plant in Carlsbad, N.M., unless the host states have decided to open them willingly. "I think it's scandalous that we have spent over $1 billion on the WIPP plan," he said.

Duffy said the WIPP program is currently costing $14 million per month to operate. "At the present time it's on a day-to-day delay until we get Congress to pass a (land withdrawal) law."

Exon echoed Thurmond's concerns with DOE's nuclear waste disposal programs, complaining that "about $30 million has been expended for the Nebraska low-level nuclear waste facility, and not a shovel of dirt has been turned."

Record -150
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01468760 SSEB Reviews State Plans For SF Transportation Route Upgrades Nuclear Waste News March 26, 1992 V. 12 NO. 13 ISSN: 0276-2897 WORD COUNT: 333 .

States will have to upgrade the transportation infrastructure in the vicinity of nuclear power plants before the Department of Energy can remove spent fuel (SF) for transportation to a permanent repository. Changes required include modifications to bridges, access highways and rail spurs. The Southern States Energy Board reviewed state plans for transportation modifications in the area of the 27 reactor sites in the southern region.

The board, in its March report, said there were important differences between highway and rail systems, the two primary modes of SF transportation. One difference is that highway systems are publicly owned and maintained, while rail lines are owned by private companies. Track condition and maintenance, usage rates and other aspects of rail transport can vary widely.

Information on planned infrastructure changes is more readily available for state highway systems than for railroads. Also, plans for highway upgrades are often made five to 20 years ahead of time, and while such plans are often tentative and subject to change due to political or budgetary considerations, they are usually comprehensive. "Funding for projects, however, is normally determined on a yearly basis, so the potential for changes due to budgeting problems is substantial," the board said.

States and counties are the main planners for road improvements, although the federal government has input through resource allocation. Coordination between state and local levels vary from state to state and problems sometimes exist.

Most rural areas, where the majority of nuclear plants are situated, do not have comprehensive project priority lists. County commissions place individual projects in the yearly budget after consultation with county road officials. SSEB explained that it was difficult to include tentative county plans in the report.

The board reviewed planned transportation modifications in 12 southern states: Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee and Texas.

Transportation Infrastructure Upgrades in the South: A Compilation of State Plans for Construction Near Nuclear Reactor Sites, March 1992, is available from: SSEB, 3091 Governors Lake Dr., Suite 400, Norcross, Ga. 30071, 404/242-7712, fax: 404/242-0421.

Record -151
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01466142 Fairness, Public Acceptance Dominate Nevada HLW Meeting Nuclear Waste News April 16, 1992 V. 12 NO. 16 ISSN: 0276-2897 WORD COUNT: 849 .

Questions of fairness, public acceptance and public understanding were the focus of the April 13 opening session of the third International High-Level Radioactive Waste Conference in Las Vegas. Las Vegas Mayor Jan Laferty Jones, whose city is 70 miles from the proposed U.S. repository site at Yucca Mountain, asked that scientists and others involved in the program "look beyond the (technical) data and discuss the issue of fairness ... and the impact on our families and the community." Jones told the assembly of more than 1,000 nuclear waste professionals that she, like more than 75 percent of Nevadans, does not share the Department of Energy's confidence that nuclear waste can be transported or disposed safely.

Nevada's fears and opposition to the repository have been heightened by the way in which the state has been treated throughout the siting process, Jones said. "There is something fundamentally wrong when the Congress of the United States forces a noxious, hazardous, unwanted facility on any state or community."

The state's mistrust and anger have been reinforced by pending congressional legislation that would strip Nevada of its environmental permitting authority over the Yucca Mountain project, Jones said, calling such an action "unprecedented and punitive." She questioned whether a nuclear waste repository at Yucca Mountain is so important and compelling that it justifies the suspension of basic democratic principles.

New Process for MRS Siting

Nuclear Waste Negotiator David Leroy said that the old way of doing business -- decide, announce, defend (DAD) -- was now dead, but he extended his remarks only to the siting process for a monitored retrievable storage (MRS) facility, not the repository proposed for Yucca Mountain.

The voluntary process is working, said Leroy, who credited some of his success to the fact that his headquarters are west of the Rocky Mountains. Hundreds of discussions with state, local and tribal leaders have produced 18 jurisdictions willing to publicly say "maybe" and a like number seriously inquiring into the MRS process, he said. "This vastly exceeds our expectations of even a year ago."

North Dakota, where three Grant County commissioners lost a recall election last month because they applied for a Phase I grant in the MRS search (NWN, March 19, 1992, p. 106), "proved the three rules of operation" for the negotiator's policy: (1) It's okay to say 'maybe;' (2) There is no penalty for saying 'no;' and (3) The public must be consulted, Leroy said. Most analysts blame the commissioners' defeat on their failure to adequately inform the public, he added.

Two Indian tribes in Oklahoma decided not to accept Phase I grant money, without penalty, because of state opposition, Leroy said. Fremont County, Wyoming, is in the midst of a public discussion of a possible grant application.

Leroy posed five questions that nuclear waste professionals must answer if a negotiated site selection process is to succeed: How committed are you to a voluntary siting alternative? Are you willing to allow sufficient time for the process to work? Are you willing to participate in the public process? Can you accept 'No'? Can you accept 'Yes'?

"Unless there is a negotiated process, there will not be an MRS," Leroy said. He noted that many analysts believe there will not be any more nuclear plants built until the waste problem is solved.

Leroy admitted that any time a site comes under serious consideration, powerful political forces will be activated to oppose it. "We can invite all opponents to a dialog; however, we can never achieve unanimity." In most cases, the opponents will win, as in North Dakota, he said.

"It may be possible to conclude negotiations within months and it may be possible to site and open an MRS by the end of 1998, but then again, it may not be," Leroy said. "We are not at the beginning of the end of the process, but at the beginning of the beginning."

1998 Waste Deadline Must Go: Leroy

Leroy pointed to DOE's 1998 spent fuel acceptance date as an example of what he called impatient public policy. There may be a cost in time for getting a negotiated settlement, he said, adding that "1998 as an absolute must go."

Since 1978, 17 MRS concepts have been discussed, and the final facility is not likely to look like any of them, Leroy noted. He said he considers all aspects of the facility negotiable -- technology, design, oversight, fees and facility ownership. Some jurisdictions, for example, may be interested in hosting an MRS only for their own region.

John Bartlett, director of DOE's Office of Civilian Radioactive Waste Management, admitted that his office has operated in the "decide, announce, defend" mode in the past, but that it is taking steps to implement an "inform and exchange" approach.

The waste office has developed activities to communicate its mission and goals to the general public, Bartlett said. He will hold a Director's Forum May 7 to discuss how to determine whether Yucca Mountain is suitable for HLW disposal.

The Yucca Mountain project office has set up a series of public tours to allow interested citizens to climb the mountain and see what the site is like. The office also has made over 200 public presentations, he said.

Record -152
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01466139 Judge Decides Against Approval Of Minnesota Dry-Cask Storage Nuclear Waste News April 16, 1992 V. 12 NO. 16 ISSN: 0276-2897 WORD COUNT: 482 .

Minnesota's Prairie Island nuclear plant should not build a dry cask storage facility without first getting either legislative approval or some assurance that the facility will not become a permanent disposal site, a state administrative law judge has decided.

"If we knew that the dry-cask storage would be temporary, then it is a reasonably safe and cost-effective way to deal with the storage problem," Administrative Law Judge Alan Klein wrote in an April 10 recommendation to the state Department of Public Utility Commissioners (DPUC). "Unfortunately, the past delays in federal siting efforts raise questions about whether the dry-cask storage will be temporary or will end up being permanent."

Northern States Power (NSP), owner of the Prairie Island plant near Redwing, Minn., has said it has only about three years of spent-fuel pool capacity remaining and last year applied to the DPUC for a certificate of need for the dry-cask system. The facility has been opposed by more than 20 antinuclear groups and the Prairie Island Sioux Indian tribe (NWN, Nov. 28, 1991, p. 466).

In his decision, Klein agreed with those who argued that a dry cask system qualified as a radioactive waste management facility under a state law requiring legislative approval for such facilities. Klein also noted that neither the Prairie Island site nor the dry cask technology has been evaluated for permanent disposal, and said that "Once the casks are in place, the path of least resistance is to leave them there indefinitely."

A reasonable alternative to building the facility now, Klein said, is to "wait and see" if the federal government makes progress on a national repository. "It is possible to stretch out Prairie Island and use other alternatives to meet energy needs" in the meantime, he said.

Laura McCarten, Prairie Island's project manager for the dry cask facility, said NSP's reaction to Klein's decision was mixed. Although pleased that the judge found no environmental, health or safety problems with the system, NSP believes Klein's concerns about it becoming a permanent disposal site are unjustified, she said.

"Our application is just for temporary storage of only Prairie Island fuel, and as a company we're on Record opposing any permanent storage of spent fuel in the state," McCarten said. She added that "as a corporation, we're doing everything we can, working within the regulatory process, to move the (Department of Energy) forward" on the national repository program.

McCarten also said NSP "absolutely" disagrees with Klein's suggestion that the plant cut its output to buy time while the repository program progresses. "Prairie Island is our cheapest, most reliable plant and it provides 20 percent of the electricity that our customers use. So it only makes sense to us that we continue to use that plant at full capacity," she said.

Klein's recommendation will be considered by the DPUC, which is not likely to make a decision on the certificate of need until late June, DPUC spokesman Dave Jacobson told NWN.

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DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01462796 Seven Types of Agencies Responsible For Transportation In Southern States Nuclear Waste News April 09, 1992 V. 12 NO. 15 ISSN: 0276-2897 WORD COUNT: 276 .

Seven types of state agencies have been designated as responsible state routing agencies for spent fuel and high-level waste shipments in the South, the Southern States Energy Board (SSEB) has determined.

Such designation, which under Department of Transportation guidelines must be determined by either legislative action or an executive branch decision, has most often been handled by state legislatures, says the board's annual Spent Fuel and High-Level Radioactive Waste Transportation Report.

In most southern states, the legislatures have enacted measures that identify and require state agencies to promulgate regulations, rules and policies on radioactive materials transportation into, within or through the state. State agencies are typically required to develop regulations for a variety of transportation issues, including routing, hazardous materials definitions, permits, advance notifications, escorts and bonding requirements.

The departmental categories are health, public safety, transportation, public service, state police/highway patrol, emergency management and nuclear waste. Only in Texas is prenotification divided between two agencies.

The 1992 SSEB Transportation Report, issued in March, also offers a broad overview of nuclear waste transportation issues, including the role of transportation in the Nuclear Waste Policy Act and the role of federal agencies in nuclear waste transportation, routing requirements, state and local government transportation restrictions, characteristics of spent fuel, transportation and storage casks, risk and cost analyses, emergency preparedness, liability, legal trends and possible changes in state laws.

The report is designed to introduce state and local officials, and the general reader, to nuclear waste transportation issues, with a focus on the southern region of the United States. It is prepared annually under a cooperative agreement with the Department of Energy (DE-FC02-87CH10324).

Contact: SSEB, 3091 Governors Lake Dr., Suite 400, Norcross, Ga. 30071, 404/242-7712, fax: 404/242-0421.

Record -154
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01462795 GAO Recommends Slowdown In HLW Cask Development Nuclear Waste News April 09, 1992 V. 12 NO. 15 ISSN: 0276-2897 WORD COUNT: 399 .

The General Accounting Office has recommended that the Department of Energy slow down its cask development program for high-level radioactive waste, given that DOE is unlikely to have even a limited monitored retrievable storage (MRS) facility operating by 1998. This additional time will give the department a few years to reevaluate the course and direction of the cask development program, "while conserving funds until there is a clear need to develop casks."

In a report sent to Senate Commerce Committee Chairman Ernest Hollings (D-S.C.) March 13, the GAO recommended that the secretary of Energy limit funding for the cask-system development program to the amount necessary to complete final-design work planned for fiscal year 1992 on the casks being developed. The secretary should refrain from submitting any final cask designs to the Nuclear Regulatory Commission for certification "at least until DOE has demonstrated that a state or tribe has agreed, in principle, to host an MRS facility at a specific site," GAO said.

The secretary should use the lull in cask development to:

- factor into cask designs nuclear industry transportation experience, the final results of DOE's facility interface study, and the unique features of certain spent fuel from boiling water reactors:
- assess, in the absence of an MRS facility, the potential effects of utilities' actions to expand their on-site spent-fuel storage capacity on the cask systems development program;
- determine whether the truck cask, in combination with its tractor and trailer, is too heavy and, if so, the most cost-effective approach to reducing the weight.

Uncertainty Creates Concerns

The transportation working group of Edison Electric Institute, a utility trade association, has recommended for several years that DOE reassess the scope and timing of its cask development program, the GAO report said. The major nuclear industry concerns with the program are based on: the uncertainty over development of an MRS; uncertainty over the time needed before a repository will be completed; and concerns about how DOE's proposed casks and transportation system would mesh with conditions at nuclear power plants, particularly in light of changes such as increased dry fuel storage.

DOE also has expressed its own concerns that the combined weight of a loaded truck cask and the tractor/trailer could exceed weight limits for normal highway conditions.

Single copies of Nuclear Waste: Development of Casks for Transporting Spent Fuel Needs Modification, GAO/RCED-92-56, March 1992, are available free from: U.S. General Accounting Office, P.O. Box 6015, Gaithersburg, Md. 20877, 202/275-6241.

Record -155
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01439435 Minnesota: The state's Public Utilities Commission is not likely to render
a decision until May on whether Northern States Power has need for a
dry cask spent fuel storage system Nuclear Waste News March 19, 1992 V. 12 NO. 12 ISSN: 0276-2897 WORD COUNT: 102 .

Minnesota: The state's Public Utilities Commission is not likely to render a decision until May on whether Northern States Power has need for a dry cask spent fuel storage system at its Prairie Island nuclear plant near Redwing, Dave Jacobson, a statistical analyst with the commission, told NWN. The utility applied for the certificate of need last year after maintaining it had only about three years of spent fuel pool capacity remaining. The plan is opposed by more than 20 antinuclear groups and by Prairie Island Sioux Indian tribe, whose reservation is located adjacent to the plant (NWN, Nov. 28, 1991, p. 466).

Record -156
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01439434 Mescalero Apaches Step Up MRS Feasibility Studies Nuclear Waste News March 19, 1992 V. 12 NO. 12 ISSN: 0276-2897 WORD COUNT: 708 .

The Mescalero Apache Tribe has submitted a request to the Department of Energy for funding to continue to study the feasibility of constructing the U.S. interim storage facility for commercial spent fuel on its reservation in New Mexico. Meanwhile, opposition to the tribe's consideration of hosting the monitored retrievable storage (MRS) facility is mounting in New Mexico, with the state legislature going on Record as overwhelmingly against the project.

In applying for the "Phase 2" MRS grant March 13, the Mescalero Apache Tribal Council stressed the "action does not commit the tribe to host a MRS facility."

If approved by DOE, the Phase 2 grant would provide an additional $200,000 for the tribe to continue fact-finding and public information efforts. Following a separate review process by the U.S. Nuclear Waste Negotiator, DOE would then "provide $2.8 million for extensive environmental, technological and socioeconomic assessments," the Tribal Council said.

New Mexico Governor Bruce King (D) has vowed the MRS will never be built in his state. Funding further studies by the Mescalero Apache would be a "waste of taxpayer money," he said.

"We have repeated over and over at every opportunity that the governor is unalterably opposed to the MRS," John McKean, spokesman for King, told NWN March 18. "We're confident we have the resources to stop the facility from being built."

If DOE approves funding for stepped up studies by the Mescalero Apaches, the state government and local municipalities also will have to spend money to track their work and intervene, McKean noted.

Tribe Moves Cautiously

In a March 13 letter to John Bartlett, director of DOE's Office of Civilian Radioactive Waste Management, the tribe appeared cautious in expanding its involvement in the MRS program. "As we enter this next step in this careful, long journey toward finding the facts and making decisions about the MRS, we will continue in our efforts to communicate truthfully and straightforwardly with our Tribal members, neighbors and other concerned individuals, within our state and on a national level," Said Tribal Secretary Fred Peso, who has been appointed the official representative on MRS matters.

Peso insisted the tribe is just studying the MRS and has made no plans to build the facility, but many New Mexicans have expressed concern that Wendell Chino, the tribe's powerful president, has made up his mind to proceed with the project. Chino has led the tribe into numerous lucrative commercial ventures, including a luxury ski resort -- the Inn of the Mountain Gods -- timber cutting, a sawmill and cattle ranching. He has called the MRS "a good business opportunity," one that could bring in $10 million annually to the 3,500-member tribe.

State Legislature Opposes Site

By a vote of 50 to 9, the state House of Representatives last month approved a memorial opposing the construction of MRS facilities anywhere in New Mexico. Reps. Max Coll (D-Santa Fe) and John Underwood (D-Ruidoso), who cosponsored Memorial 66, said siting another nuclear storage facility in the state -- in addition to the proposed Waste Isolation Pilot Plant near Carlsbad -- would hurt tourism, business investment and economic development. Memorials are indications of legislative sentiment, but they carry no legal weight.

Approval for the second round of funding for the Mescalero Apache should come "within a short time, if it's handled in the same fashion as their initial application," Verne Nelson, spokesman for Waste Negotiator David Leroy told NWN March 18.

Meanwhile, several other Native American tribes and counties have received, or are considering applying for, $100,000 MRS Phase 1 study grants. On Feb. 20, DOE awarded $100,000 grants to the Chickasaw Indian Nation and the Sac and Fox Nation, both of Oklahoma. But the Sac and Fox tribe has elected not to accept the funds, Nelson said.

"Based upon requests for additional information, we are optimistic that at least a half-dozen more jurisdictions will submit grant applications," Nelson said. The requests include a mix of states and Indian tribes, he added. Applications for Phase 1 MRS grants must be submitted to DOE by the end of the month. The deadline for Phase 2 grant proposals is June 30, but Nelson said that it is "highly possible" the date will be extended.

Other local governments and Indian tribes that have been awarded grants are the Yakima Indian Nation of Washington, Fremont, Wyo., and Grant County, N.D.

Record -157
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01439428 Yankee Atomic To Be First Utility To Decommission A Nuclear Plant Nuclear Waste News March 19, 1992 V. 12 NO. 12 ISSN: 0276-2897 WORD COUNT: 619 .

Yankee Atomic Electric Co., the first U.S. utility to operate a nuclear plant, also will be the first decommission one.

The utility's board of directors decided Feb. 26 not to restart the 32-year-old Yankee Rowe plant near Bolton, Mass., which had been shut down for inspection and testing since last October. Plant officials estimated it would cost at least $23 million to certify that the 33-foot-high steel reactor vessel could meet present Nuclear Regulatory Commission Standards.

Citing a dwindling demand for electricity, the board decided the utility could not afford to keep 185-megawatt plant in operation. "You can honestly say that we're a victim of this recession, "said plant spokesman William McGee.

In the wake of the shutdown decision, the board subsequently decided to begin decommissioning as soon as possible.

Yankee Atomic will spend at least a year and a half developing its decommissioning plan, which could be submitted to the NRC as early as 1994, McGee told NWN. "The earliest we could start actually dismantling the plant would be in 1995", McGee said. The company intends to return the site to "green field" conditions, that is, to leave the area suitable for unrestricted use.

'Too Early' To Know Fate of Waste

"It's still too early to tell" what will be done with the 533 spent fuel assemblies, McGee said. One possibility would be an on-site independent dry storage facility. He added that Yankee Atomic is watching progress on the federal Monitored Retrievable Storage facility very carefully.

It is also is too early to tell how the approximately 160,000 cubic feet of low-level waste that will result from the decommissioning will be handled. Massachusetts is a "go-it-alone" state, not a member of a compact, and the state is "no further along than anyone else; we have no temporary sites and no in-state site search, "McGee said. Massachusetts is discussing a possible waste disposal contract with a large number of other states and compacts around the country, but "no significant progress has been made," he said.

McGee did not know the stepped-up decommissioning schedule for Yankee Rowe would affect those discussions. "Everyone knew we would have to decommission the plant someday", he said, adding that it is too early to say whether the additional waste volume much sooner than expected would be a factor in the discussions.

Massachusetts is unique among states with nuclear power plants in that only about one-third of its waste is generated by the state's two nuclear power plants, McGee said. The state has a number of large hospitals, research centers and radiopharmaceutical manufacturers that produce most of its LLW.

Total state LLW production in recent years has been around 50,000 to 60,000 cubic feet per year, down from 200,000 cubic feet per year a decade ago.

Yankee Atomic will develop its decommissioning plan in-house, possibly with assistance as needed from contractors. Plant officials see the Yankee Rowe experience as playing an important role in development of the NRC's final decommissioning regulations, which are now in draft form. "We are pioneering three new roads," McGee said, new regulations, new technology and new ways of handling the public relations aspects of a new effort.

Even though Yankee Rowe is the company's only nuclear power plant, Yankee Atomic will remain in the nuclear engineering and nuclear services business after the plant has been decommissioned, McGee said.

The company already does considerable work for other utilities, particularly in New England, and this work will continue after Yankee Rowe is dismantled. McGee called Yankee Atomic "unique" in being the only company that both operates a plant and provides nuclear plant services to other utilities. Now, it also will be the only utility to have decommissioning experience as well. The board of directors will, undoubtedly, look into the option of marketing decommissioning services to other utilities.

Record -158
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01397731 EPA Puts HLW Standard on Front Burner Over DOE's Objections Nuclear Waste News February 27, 1992 V. 12 NO. 9 ISSN: 0276-2897 WORD COUNT: 603 .

The Environmental Protection Agency has decided to make issuance of the high-level radiation protection standards a "top priority," EPA officials said Feb. 21. The Department of Energy, however, is insisting that EPA should delay the final CFR 40 Part 191 "to get it done right."

"We're serious about proposing the final rule in late spring or summer of this year," Ray Clark, a project leader in EPA's Office of Radiation Programs, told the Nuclear Regulatory Commission's Advisory Committee on Nuclear Waste (ACNW) meeting in Bethesda, Md., last week. "There's a push to get it out, and not approach infinity on the number of working drafts."

For years, DOE officials have voiced the urgent need for EPA to issue the standards that will govern activities at both the proposed geologic repository for spent nuclear fuel at Yucca Mountain and the Waste Isolation Pilot Plant for military transuranic waste. But last week, DOE officials urged EPA to slow down the rulemaking process to allow time for additional DOE input.

DOE Seeks 'Draft Four'

"We have requested EPA to produce another draft -- "four" -- which will include all of DOE's and NRC's comments, and allow comment time on that," said Edward Regnier, chief of waste management for DOE's Air, Water and Radiation Division.

EPA issued its most recent discussion draft of the proposed rule -- Notice of Proposed Rulemaking (NPRM) -- Feb. 3 Known as "draft four" outside the agency, NPRM follows "Working Draft #3," a discussion draft floated by EPA in April 1990. EPA issued a final rule in 1985, but it was challenged by an environmental group and remanded to the agency for revision in 1987 by the First Circuit Court of Appeals in Boston.

Regnier said DOE had about 20 concerns with the proposed rule that EPA failed to address in the latest draft standard. "We think it's a real step backwards," Regnier charged. "The difficulty of the standard being implemented may have actually gotten worse from 1985."

DOE officials believe the most recent draft standards would greatly increase the stringency of ground water protection requirements over the 1985 rule. DOE is also concerned that EPA wants to extend the proposed definition of "undisturbed performance" to 100,000 years from 10,000 years, Regnier said.

ACNW Chairman Dade Moeller argued against EPA's use of "exposure to a maximally exposed individual," rather than the "mean dose to a critical group," in NPRM Subpart B 191.14. "The mean dose to a critical group is easier to define with certainty than to the individual," he said.

Clark said that EPA did put the "critical group" language in a draft of the standard never released. "But there is a concern that since it is a mean dose, you could have individuals who get considerably more than that," he said.

Technical Guidances Added

Another key change from "Working Draft #3" was the addition of several guidances for the implementation of Subparts B and C. Many scientists have suggested that a spectrum of possible future demographics and biosphere scenarios should be considered in that guidance. But EPA has decided to assume that the level of technology in the future is the same as today. Compliance should not center upon speculation about "future humans and the biosphere," Clark said.

The discussion draft says "it would be appropriate for assessments made under Part 191 to contain the assumption that many factors are essentially the same as today's. Factors which could be included in this category include demographic patterns, such as emergence of large populations where there are currently none, level of knowledge and technical capability, human physiology and nutritional needs, the state of medical knowledge and technical capability, human physiology and pathways through the environment."

Record -159
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01386338 Railroads Told To Repay SF Shipment Overcharges Nuclear Waste News February 20, 1992 V. 12 NO. 8 ISSN: 0276-2897 WORD COUNT: 236 .

The Interstate Commerce Commission Feb. 7 ordered 10 railroads to pay nearly $10 million in compensation for overcharging the federal government for spent nuclear fuel shipments between November 1975 and December 1988.

In issuing a formal opinion of its 4-0 decision in September, the commission said that the railroads owe the government a total of $9.8 million, including $6.3 million in reparations and $3.5 million in interest. The departments of Energy and Defense brought the administrative action against the railroads amid allegations the carriers had overcharged the federal government for the shipments. The railroads have until Feb. 29 to reimburse the government.

Southern Pacific owes the most to the federal government with a bill of $4.5 million, including interest. The other nine railroads, and the amount they owe, including interest, are the following: Burlington Northern ($990,000); CSX Transportation ($878,000); Chicago and North Western ($14,900); Conrail ($140,500); Louisville and Nashville ($132,000); Norfolk Southern ($14,600); Pittsburgh and Lake Erie ($941,000); Seaboard Coast Line ($1.756 million); and Union Pacific ($310,000).

The debts of two bankrupt lines, the Boston and Maine and the Chicago, Milwaukee, St. Paul and Pacific Railroad, will be paid by the railroads that cooperated with them in their shipments of spent nuclear fuel.

As a result, Union Pacific, which worked with Boston and Maine, owes an additional $154,137, and Burlington Northern, which teamed with Chicago Milwaukee, must pay $8,600 more. ICC Chairman Edward Philbin did not participate in the commission's vote.

Record -160
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01375624 The Southern States Energy Board has released its 1991-92 edition of the

Spent Fuel and High-Level Radioactive Waste Transportation Report,

prepared under a cooperative agreement with the Department of Energy. Nuclear Waste News February 13, 1992 V. 12 NO. 7 ISSN: 0276-2897 WORD COUNT: 31 .

The report, a primer for the educated lay person, provides a general introduction to issues surrounding radwaste transport. Contact: Ricky Gibson, SSEB, 3091 Governors Lake Dr., Suite 400, Norcross, Ga. 30071, 404/242-7712.

Record -161
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01369135 Bush Seeks $550 Million For NRC In Fiscal 1993 Nuclear Waste News February 06, 1992 V. 12 NO. 6 ISSN: 0276-2897 WORD COUNT: 691 .

The Nuclear Regulatory Commission is requesting $21.1 million in fiscal year 1993 for its High-Level Nuclear Waste Regulation program, an increase of $2.3 million over the current $18.8 million budget. Most of the increase is needed to fulfill requirements related to the Energy Department's high-level waste repository program at Yucca Mountain, NRC said.

The request is part of an overall NRC budget of $550 million, outlined Jan. 29 by James Taylor, the agency's executive director for operations and chief financial officer. The overall figure is up $37.5 million from the current $512.5 million budget, an increase Taylor said was due mostly (about 60 percent) to salary and travel expense increases, plus construction of a new building at the commission's Rockville, Md., headquarters. The remaining 40 percent of the increase would go into programs.

The high-level waste (HLW) program encompasses all of NRC's public health and safety licensing, inspection and environmental reviews for HLW management and disposal. It also covers research into the safety of HLW management, storage, transportation and disposal.

The added $2.3 million over the current budget is requested primarily for Yucca Mountain-related activities, including: evaluation of DOE's surface-based testing at the site; evaluation of DOE's design of its exploratory studies facility; development of repository performance assessment models and codes; and consultation with DOE on its monitored retrievable storage facility program prior to submission of a license application.

The increase also is needed, NRC said, "to develop a technical basis to assess potential geologic hazards to the Yucca Mountain site and to initiate research on the radionuclide source term of spent fuel." A small piece of the increase ($318,000) would pay for salary adjustments.

NRC has also submitted a $40.8 million budget for its Nuclear Material and Low-Level Waste Safety and Safeguards Regulation program, up slightly from the current figure of $39.3 million. The increase is accounted for entirely by higher salaries and administrative transportation costs, with "no significant resource changes due to program requirements," NRC said.

LLW Down Slightly

NRC has budgeted $2.5 million for low-level waste disposal, licensing and inspection, a drop of $50,000 from the current figure. NRC will continue in FY'92 and FY'93 to provide "limited technical assistance to" agreement states, as well as "prelicensing guidance" to potential applicants for disposal facility licenses.

Work also will continue on the development of "an in-house performance assessment modeling capability in the area of source-term evaluation for timely completion of reviews as mandated by the (Low-Level Radioactive Waste Policy Amendments Act).

One new endeavor in FY'92 and FY'93 will be to develop a "national mixed-waste profile" to assist in the development of treatment and disposal facilities. This will be done in cooperation with the Environmental Protection Agency.

NRC expects over the coming fiscal year to complete evaluations of about 70 license applications for uranium recovery facilities and conduct inspections of existing facilities. One application that will be reviewed is for the disposal of uranium and thorium byproduct materials at a site near Clive, Utah.NRC will review two decommissioning funding plans for major fuel cycle facilities. Decommissioning activities also will include continuation of a review of 18,000 materials and fuel cycle facilities decommissioned since 1965, "to ensure that these sites were adequately decontaminated before their licenses were terminated."

The budget request for "nuclear material transportation and safeguards" is $200,000 below the current $1.7 million. NRC said it will complete by the end of the coming fiscal year evaluation of about 100 container design applications and 40 "transport safeguards plans" for shipments of special nuclear material. The commission also plans to conduct about 1,300 transport-related safety inspections of nuclear material, fuel and reactor facility licensees.

NRC's request of $4.9 million for nuclear material safety activities represents a $250,000 increase over the current figure. The extra funds are needed, the commission said, "to inspect implementation of the

medical quality management rule by medical licensees. NRC expects to complete the evaluation in FY 1993 of about 90 license applications and topical reports for nuclear fuel cycle facilities, and "review safety demonstration submittals prepared by the major nuclear fuel cycle licensees biennally and ... amend the licenses accordingly."

Copies of the budget are available from: Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, D.C. 20013-7082.

Record -162
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01364885 DOE Awards Two More MRS Feasibility Study Grants Nuclear Waste News January 30, 1992 V. 12 NO. 5 ISSN: 0276-2897 WORD COUNT: 108 .

The Department of Energy has awarded $100,000 feasibility grants to Fremont County, Wyo., and the Yakima Indian Nation of Washington state (NWN, Jan. 9, 1992, p. 11) to study the possibility of siting a monitored retrievable storage (MRS) facility for spent nuclear fuel in those areas.

With the two grants, DOE has now awarded four feasibility grants. Earlier awards went to the Mescalero Apache Tribe of New Mexico and Grant County, N.D. (NWN, Oct. 24, 1991, p. 412 and Nov. 28, 1991, p. 463).

John Bartlett, head of DOE's civilian waste office, said he was "very pleased" to see an increasing number of grantees participating in the voluntary site screening process.

Record -163
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01364867 The Nuclear Regulatory Commission in considering a license amendment
application from Consumers Power Co.'s Palisades Plant, Convert, Mich. Nuclear Waste News January 30, 1992 V. 12 NO. 5 ISSN: 0276-2897 WORD COUNT: 56 .
The Nuclear Regulatory Commission is considering a license amendment application from Consumers Powers Co.'s Palisades Plant, Convert, Mich., which would permit it to operate with longer fuel burn-up cycles. Under the proposal, the plant would be permitted to store higher enriched fuel assemblies in its spent fuel pool. See the Federal Register, Jan. 27, 1992, p. 3076-3077.

Record -164
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346904 Storage, Fuel Transfer Options For MRS Studied Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 169 .

Storage and fuel transfer technologies are being evaluated for the Monitored Retrievable Storage (MRS) facility, Alden Segrest, MRS design manager for DOE's repository program management and operating (M&O) contractor, told the Institute of Nuclear Materials Management Spent Fuel Seminar in Washington, D.C., Jan. 16.

As part of the MRS options study, the MRS group will design a dry fuel transfer system for use with the storage technologies being considered. Wet transfer and storage of fuel will be considered as one alternative. The storage technologies will be compared with systems requirements and with each other. Design, procurement and construction cost and schedule estimates will be prepared.

Based on the initial evaluations, DOE will select a design on which to base its Safety Analysis Report, required for a Nuclear Regulatory Commission license. Finally, DOE and the M&O will prepare construction design and procure materials and services.

The M&O contractor, composed of 10 companies headed by TRW, will send its conceptual design report evaluating and comparing storage methods, costs and schedules to DOE by May 1.

Record -165

DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346903 MRS Lowers HLW System Costs If Utility Expenses Are Counted Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 349 .

In contrast to earlier studies, a new systems analysis shows total system costs for the high-level waste repository program to be much lower with a monitored retrievable storage (MRS) facility compared to a system with no MRS, Jeffrey Williams from the Department of Energy's Office of Civilian Radioactive Waste Management told the INMM Spent Fuel Seminar Jan. 16.

The new conclusions result from including costs to reactors to maintain spent fuel pools (or other storage options) while awaiting decommissioning, Williams said. These costs are not considered to be federal costs, but are important to the overall systems analysis, he explained.

Recent analyses (Pacific Northwest Laboratories' PNL-7778, 1991) indicate annual utility costs for maintaining spent fuel pools after reactor shutdown will be on the order of $3.7 million to $4.8 million per site. This is a substantial increase over estimates in DOE's 1989 MRS Systems Study, which assumed costs would be on the order of $2.2 million to $2.7 million per year, Williams said.

The earlier studies indicated that, if a repository were delayed to 2013, acceptance of spent fuel at an MRS not linked to the repository schedule could save utilities an estimated $1 billion in storage costs at shut-down reactors; however, these cost savings were not computed into the cost analysis in the MRS systems studies. The PNL analysis shows storage costs saved would be closer to $3 billion.

The PNL study analyzed two scenarios of repository availability (2010 or 2020). Total life cycle costs were evaluated for three cases in each scenario: 1) no MRS facility; 2) an MRS facility with a capacity limit of 15,000 metric tons of heavy metal; and 3) an MRS facility with no capacity limit.

Results showed an MRS could reduce total systems costs substantially under some circumstances. If repository operation is assumed to begin in 2010 and the legal capacity limits on the MRS are lifted, the MRS would decrease systems costs by $1 billion (from $28.1 billion to $27.1 billion). If repository operation were delayed until 2020, an MRS with no capacity limit could reduce the system costs by $3.6 billion ($33.2 billion to $29.6 billion).

Record -166
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346902 Dry Storage Emerges As Key Near-Term Spent Fuel Option Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 1650 .

Spent fuel dry storage was the major item on the agenda at the annual Institute of Nuclear Materials Management Spent Fuel Seminar in Washington, D.C., Jan. 15-17. More than half of the presentations dealt with some aspect of dry storage, either at reactor sites or at a federal Monitored Retrievable Storage (MRS) facility.

Dry storage is a "tough market, with tough competition," said Paul Childress from B&W Fuel Company, one of the key competitors in the field. B&W is marketing CONSTAR concrete storage canisters.

The Nuclear Regulatory Commission is reviewing the safety analysis report (SAR) on Pacific Nuclear Systems' NUHOMS modular cask system and certification is expected in mid-1992, said Pacific Nuclear's William McConaghy. If the cask is certified under 10 CFR 72, Subpart L, a site license amendment will no longer be needed at each facility where the system is used.

The NUHOMS system can handle five-year cooled fuel from both pressurized water reactors (PWRs) and boiling water reactors (BWRs). The SAR was submitted in December 1990. Since then, the storage pad has been reclassified as "non-safety related," which should simplify licensing, McConaghy said.

The internal basket used with the NUHOMs system is licensable for transportation inside the certified transportation cask, McConaghy said. The fuel basket would be transferred from the NUHOMs module to a shipping cask at the reactor storage site. Once the fuel reached the MRS site, it could be stored in the basket, eliminating rehandling of the fuel.

PN Looks To Transportation Links

Pacific Nuclear, Kawasaki Heavy Industries, the Electric Power Research Institute, the Department of Energy and utilities now using NUHOMS on-site storage modules are working on a cooperative licensing effort for the transportation system interface. They expect to submit to topical report to NRC by April 1992.

Pacific Nuclear also is designing a transportation cask under a DOE contract, and expects to submit the SAR to NRC in June 1994. The company also plans to propose a NUHOMS-based storage system for the federal MRS.

B&W Fuel Co. has submitted a Topical (non-site-specific) Safety Analysis Report to NRC for the PWR version of its CONSTAR concrete dry storage system and has responded to the first round of questions from NRC, Childress said. A BWR version of the cask is being developed.

The three issues of most concern to NRC following the October 1991 review of the CONSTAR SAR were the need for more definition of the fuel transfer system, data on cask performance if the heat pipes were to fail, and more information on the application of relevant ASME (American Society of Mechanical Engineers) codes.

CONSTAR's PWR configuration can take 32 assemblies. It can be used with all PWR fuel used in the United States except fuel from the South Texas Project, which is to long for the cask. CONSTAR casks can take Westinghouse and B&W fuel with the control elements. The cask has a heat capacity of 25,000 W. Fuel is loaded into the cask in four-assembly lots, which can be moved with a 50-ton crane. The minimum crane requirement allows CONSTAR to be used at smaller power plants with smaller cranes.

The BWR option will be able to handle 76 fuel assemblies with channels and the transfer system will carry nine assemblies per trip.

CONSTAR Tests Next Month

B&W expects to complete full-scale performance tests of the CONSTAR heat pipes, a unique feature of the system, next month. The results of the tests will be included with the TSAR.

The design for Transnuclear's metal dry storage casks evolved in the late 1980s from a spinoff of large rail transport casks to a stand-alone storage technology for at-reactor use that could compete with cheaper concrete systems, said Charles W. Pennington. The TN-40, which is being designed and licensed specifically for use at Northern States Power's Prairie Island nuclear plant in Red Wing, Minn., is the first of the new generation of Transnuclear advanced storage casks.

Transnuclear's strategy for developing a new generation of metal casks included: reducing fuel assembly unit storage costs by increasing cask capacity through use of the superior weight-to-capacity ratio of metal casks; assigning credit for boron; developing a design requiring 10-year-cooled fuel; making storage system materials more appropriate to their function; developing a design capable of being fabricated in the United States; minimizing the effect of the fabrication learning curve on costs; incorporating fabrication approaches already in use and/or approved by the NRC; and incorporating NRC-approved analysis techniques that apply to storage systems, but not necessarily to transport systems, Pennington said.

NRC is reviewing Northern States' SAR for the TN-40, and is expected to approve it in the next few months, Pennington said. At that time, Transnuclear intends to negotiate fabrication contracts for several TN-40 casks to be delivered to Prairie Island by 1993.

Transnuclear has developed a generic Advanced Storage Cask design and, following completion of the NRC review of the TN-40, will submit a topical report to NRC for the standard design.

TN, AECL Adapt MACSTOR To U.S.

Transnuclear also is working with Atomic Energy of Canada Ltd. to adapt the Canadian Modular Aircooled Canister Storage System (MACSTOR) for use with light water reactor (LWR) fuel in the United States, said AECL's Peter Pattantyus. Development has proceeded to completion of successful full-scale thermal testing. In 1990, AECL adapted the MACSTOR approach for use with CANDU fuel. That design, called CANSTOR, also has completed successful full-scale thermal testing.

On Sept. 19, 1991, Foster Wheeler Energy Corp. and GEC-ALSTHOM completed the first truly independent spent fuel storage installation in the United States, the Modular Vault Dry Store (MVDS) for fuel from Public Service Company of Colorado's shut-down Fort St. Vrain nuclear plant in Platteville, Colo. Work on the vault was completed 11 weeks ahead of schedule, said Foster Wheelers' Robert Bosch, Jr. Fuel loading has begun.

The MVDS is a concrete structure designed to hold 1,482 spent fuel blocks. The facility has a reception bay, six storage modules and three storage wells. Each module stores 45 fuel storage containers with six spent fuel blocks per container. The storage vaults are concrete structures with inlet and outlet ducts which provide ambient air for cooling the spent fuel. The fuel storage containers are cylindrical carbon-steel pressure vessels with a flame-sprayed aluminum coating to prevent corrosion. Adjacent to the six storage modules are three supplementary storage locations or storage wells, which can be used to isolate a fuel storage container from the vault cooling system, permit testing of a container or provide a temporary location for a container while the fuel is being transferred to a DOE shipping container.

Virginia Power has been using dry metal casks in an independent spent fuel storage installation (ISFSI) since 1986 to maintain fuel core discharge capability at the Surry nuclear plant. The work has been supported, in part, by DOE, the Electric Power Research Institute and Japan's Central Research Institute of the Electric Power Industry (CRIEPI).

VP Orders Four More Casks

The utility's experience has included: testing three dry storage casks at the Idaho National Engineering Laboratory with both intact and consolidated spent fuel; loading and storage of 12 CASTOR V/21 casks; loading of one each of the Westinghouse MC-10 and Nuclear Assurance NAC-128 casks in 1991; and procurement of a second NAC-128 cask and a GNSI CASTOR X/33 cask for loading in 1992 as part of the DOE/EPRI demonstration. VP also has ordered four CASTOR V/21 casks for spring 1992 delivery, said staff engineer Brian Wakeman.

Michael Valentine from Siemens Nuclear Power Corp. described the FUELSTOR Vault, a concrete vault for both BWR and PWR fuel designed to minimize worker and public exposure. Various wall thicknesses and diameters for the air-flow cooling penetrations were analyzed using the KORIGEN computer code to calculate the spent fuel activity and the RANKERN and ANISN codes to calculate the shielding effect for gamma and neutron radiation respectively. The resulting design has a maximum calculated radiation dose rate on the outside wall of less than 1 mrem/yr, a factor of 100 below the new NRC dose limits to the public.

Sierra Nuclear Corp.'s Ventilated Storage Cask (VSC) system is the first concrete storage system to receive NRC approval, said Sierra's Willington J. Lee.

In March 1991, NRC issued the Safety Evaluation Report on the VSC system designed for use at Consumer Power Co.'s Palisades nuclear plant in South Haven, Mich., approving the topical report.

Sierra immediately submitted the generic cask license submission, making no changes from the approved topical report. "Because there were no changes between the approved topical report and the generic cask design submittal, and the need for spent fuel storage space at the Palisades Power Plant, the NRC has granted an exemption to construct eight VSC casks prior to completing cask certification procedures, Lee said.

Palisades To Load Fuel This Spring

The concrete storage pad, a thick, reinforced concrete pad capable of holding 24 VSC casks, was built last summer. VSC cask construction was begun in September 1991, with fabrication of the metal components. The Multi-assembly Sealed Basket is being fabricated by Richmond Enterprises, Salinas, Calif. The first basket is scheduled to be delivered to the plant early this year. The basket transfer cask is being fabricated by March Metalfab Inc., Hayward, Calif., and also will be delivered early this year.

On-site construction of the Palisades concrete cask began this month. Delivery also began this month on metal inner liners for the casks. With all metal components on-site, a concrete cask can be completed in two to three weeks, Lee said. An additional two weeks is needed for the concrete to cure. The schedule calls for all components to be on-site and for the facility to be ready to begin loading fuel by the second quarter of 1992.

Robert Anderson described a "new generation" of dry storage casks being developed by General Nuclear Systems Inc. (GNSI) and Ontario Hydro (OH). The cask, known as the GNSI/HDC system, uses high-density concrete shielding encapsulated in a steel vessel. GNSI and OH are proceeding with final development of the cask system, which should be ready for the U.S. market by the mid-1990s.

Record -167
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346900 Pacific Northwest Laboratories is winding up its work supporting dry
storage of spent nuclear fuel, said PNL reactor systems manager Mitch
Cunningham. Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 66 .
Final reports on performance tests of six dry storage systems (four metal casks and two concrete storage systems) will be out in 1992. Nuclear Regulatory Commission recommendations for the COBRA-SFS and HYDRA-II codes for predicting spent fuel and storage system thermal performance will be incorporated in 1992 and 1993. The final data report for the four-year Series B spent fuel oxidation tests will be published in 1993.

Record -168
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346889 The Department of Energy's Office of Civilian Radioactive Waste Management
has produced two new videos on waste issues: Monitored Retrievable
Storage (8 minutes, 15 seconds) and World Wide Waste Management (20
minutes). Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 33 .
The office also has available a new fact sheet, Spent Fuel Storage at the Monitored Retrievable Storage Facility, DOE/RW-0324p, December 1991. Contact: OCRWM Information Center, P.O. Box 44375, Washington, D.C. 20026, 800/225-6972 or 202/488-5513.

Record -169
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346877 Sierra Nuclear Corp., Scotts Valley, Calif., has purchased Pacific Nuclear
Systems Inc.'s interest in the Pacific-Sierra Nuclear Associates
partnership, founded in 1988 by SNC and PNSI to develop, license, sell
and service dry spent fuel storage casks. Nuclear Waste News January 23, 1992 V. 12 NO. 4
ISSN: 0276-2897 WORD COUNT: 92 .
It developed, licensed, fabricated and demonstrated the Ventilated Storage Cask (VSC) systems. Completed contracts included a demonstration cask at Idaho National Engineering Laboratory and construction of cask systems at Palisades and Point Beach nuclear plants. On-going contracts include delivery of eight casks and associated equipment to the Palisades plant this spring and continued support of the Point Beach system. The purchase of PNSI's interest in the partnership consolidates management in SNC's nuclear fuel and waste management division. Contact: John V. Massey, Sierra Nuclear Corp., 5619 Scotts Valley Dr., Scotts Valley, Calif. 95066, 408/438-6444.

Record -170
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346873 Pacific Nuclear has entered into a licensing agreement with the Korean firm

Hyundai Heavy Industries Ltd. (HHI) allowing Hyundai to fabricate and

sell Pacific Nuclear's NUHOMS dry spent fuel storage system in Korea. Nuclear Waste News January 23, 1992 V. 12 NO. 4 ISSN: 0276-2897 WORD COUNT: 40 .

"This agreement, combined with our existing agreement with Japan's Hawasaki Heavy Industries Ltd., provides Pacific Nuclear with an opportunity to play an important role for storage of spent nuclear fuel in the Far East," said Pacific Nuclear's president Michael J. Scholtens.

Record -171
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346860 Apaches Stress Any MRS On Tribal Land Will Be Built On Their Terms Nuclear Waste News January 16, 1992 V. 12 NO. 3 ISSN: 0276-2897 WORD COUNT: 545 .

If the Mescalero Apaches of Southern New Mexico finally agree to host a monitored retrivable storage (MRS) facility for spent nuclear fuel, it will be on the tribe's terms, not the Department of Energy's or other federal agencies', Fred Peso, executive secretary of the tribal council, told a Washington, D.C., nuclear waste management conference Jan. 15.

"This time, we're going to write the treaty," Peso told the Institute of Nuclear Materials Management's Spent Fuel Conference. "We're sitting down with the United States as a sovereign nation. We had sovereignty before the United States even became a nation. We're dealing as an equal."

A written statement from tribal council Chairman Wendall Chino said, "Our voice speaks loudest in determining the architecture, land use and environmental compatibility of this facility. We would require that the facility honor our land and our people by fitting our needs and interests -- or we will have nothing to do with it ... We can afford to walk away from this dialogue at any time. The government timetable is not our timetable. The government needs are negotiable. Our requirements are not."

MRS Seen As Business Venture

The Apaches are looking at the MRS as a long-term business venture, Peso stressed, noting the tribe's history of entrepreneurship. He pointed to construction and operation of the world-famous resort on the Mescalero Reservation, The Inn of the Mountain Gods, and other enterprises including timber and cattle operations.

Peso also stressed that the Apaches were not taking on the project simply because the government "offered us so much money." He stressed repeatedly that the tribe can afford to walk away at any time. "We have turned away good business prospects in the past."

The Apaches are gathering information from as many sources as possible, Peso said. Tribal representatives and consultants have talked with DOE, nuclear experts and nuclear industry organizations, and anti-nuclear and environmental groups. "It is very hard to have an objective discussion about nuclear energy and nuclear waste," Peso complained. "The nuclear advocates, nuclear critics, and, most especially, the press, have created a thick fog which blinds many who are interested in the facts."

"The news media has not helped us at all. (Also) a lot of information coming from government has not helped," Peso said. "We need people to start reporting things correctly."

The Apache tribe is hiring its own experts, "people experienced in this technology," Peso said. The tribe also has brought in experts in safety, environmental assessment and communication. Tribal representatives are traveling to look at similar spent fuel storage at power plants around the country; however, they have no immediate plans to visit European facilities, since the European program is dependent on reprocessing," Peso told NWN.

Peso also criticized designation of the MRS as a "dump," pointing out that it would be a multi-million dollar warehouse made of earthquake proof steel and reinforced concrete. If the MRS is a dump, then Ft. Knox is a gold dump, he concluded.

The Apaches' decision to proceed with the MRS study had not been easy, Peso acknowledged, but the tribe was not afraid of controversy, he said. "After fighting five nations, what's a little controversy." Peso said cooperation from the New Mexico government "would sort of help," but when asked if the Apaches would proceed without New Mexico's support, he replied, "We're sovereign."

Record -172
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346858 NRC/NAS Begins Three-Year Waste Separation, Transmutation Study Nuclear Waste News January 16, 1992 V. 12 NO. 3 ISSN: 0276-2897 WORD COUNT: 369 .

The National Research Council has begun a three year evaluation of existing and future technologies for separation and transmutation of radioactive waste to reduce waste volumes and decrease long-lived or toxic radionuclides. The study, commissioned by Energy Secretary James Watkins, was launched Jan. 13-14 with an international symposium in Washington, D.C. The final report is due by July 31, 1994.

The 19-member Separations Technology and Transmutation Systems (STATS) panel is chaired by Norman C. Rasmussen from Massachusetts Institute of Technology. Three subpanels have been established: Separations, chaired by Fred McLafferty, professor of analytical chemistry at Cornell University; Integration, chaired by Edward Mason, retired; and Transmutation, chaired by Edwin Kintner, retired.

The STATS panel began its work with the January symposium on separations and subsequent processing system technologies, and their application to DOE management of both civilian spent fuel and defense program wastes. The symposium emphasized:

The extent to which the technologies have been demonstrated and on what scale;

- The potential benefits and detriments to disposal of high-level radioactive wastes in geologic repositories;
- The technical, scientific, economic and regulatory uncertainties associated with those technologies, of foreign or domestic origin, that may have been demonstrated to only a limited degree;
- The time required for technology demonstration and its relationship to repository program timing; and
- The positive and negative impacts of technologies waste arisings over the entire fuel cycle.

The panel's statement of work says the evaluations "will involved identification and discussion of the amount and chemical characteristics of the products, including secondary waste streams, of the facilities constructed to enable the technologies to be effectively applied to the waste management system. Mass balances will be developed for all significant materials entering into or deriving from the affected facilities."

The panel also will evaluate the probable costs of development of various technologies through the demonstration stage, and the probable costs of construction and operation of full-scale facilities.

An interim report or reports could be produced by the panel, depending on DOE's needs. An early letter report, summarizing the symposium findings, could be prepared by April 30, Leif Eriksson, senior staff officer, told NWN. For more information on the panel, contact Eriksson at National Research Council, 2101 Constitution Ave., N.W., Harris Building, Rm. 456, Washington, D.C. 20418, 202/334-3066, fax: 202/334-3077.

Record -173
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346850 The Nuclear Regulatory Commission staff has found no significant negative
impacts from GPU Nuclear Corp.'s Nuclear Waste News January 16, 1992 V. 12 NO. 3 ISSN: 0276-2897 WORD COUNT: 44 .

The Nuclear Regulatory Commission staff has found no significant negative impacts from GPU Nuclear Corp.'s request for approval to increase spent fuel pool storage capacity at the Three Mile Island Unit 1 plant, Dauphin County, Pa., from 749 assemblies to 1,494 assemblies (Docket No. 50-289).

Record -174
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01346843 The Department of Energy has extended the time period for accepting grant
applications to assess the feasibility of siting a Monitored
Retrievable Storage facility for spent fuel, as specified under the
Nuclear Waste Policy Act. Nuclear Waste News January 16, 1992 V. 12 NO. 3 ISSN: 0276-2897
WORD COUNT: 64 .
Grants are available to states, Indian tribes or affected units of local government. Applications for Phase 1 assessments will be accepted through March 31, 1992, and applications for Phase 2 will be accepted through June 30, 1992. See the Commerce Business Daily, Jan. 6, 1992, p. 5, or contact: DOE, Attn: Document Control Specialist, P.O. Box 2500, Washington, D.C. 20013, M. Detmer, Contracting Officer, 202/586-6753.

Record -175
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01342005 Niagara Mohawk Power Corp., Syracuse, N.Y., has awarded a turnkey contract
to Holtec International for reracking the spent fuel pool at the Nine
Mile Point Unit One nuclear power reactor in Scriba, N.Y., and
replacing the racks with Holtec's maximum-density racks. Nuclear Waste News January 02, 1992 V. 12 NO. 1 ISSN: 0276-2897 WORD COUNT: 80 .
Holtec will remove existing racks and engineer, license, manufacture and install new racks. The change-out will be completed in two campaigns. During the first campaign (1994-95), the north half of the pool will be reracked with approximately 1,900 storage cells, replacing 1,066 existing cells. In the second campaign (around the year 2000), the remainder of the pool will be reracked, resulting in a final capacity of approximately 4,000 cells. Contact: Christian Blessing, Holtec International, 2060 Fair-fax Avenue, Cherry Hill, N.J. 08003.

Record -176
DIALOG(R)File 636:IAC Newsletter DB(TM) (c) 1996 01340524 ONTARIO HYDRO'S Board of Directors has approved a $50 million Canadian
"monitored retrievable storage" (MRS) facility for the utility's
eight-unit Pickering Station outside Toronto. Nuclear Waste News January 09, 1992 V. 12 NO. 2
ISSN: 0276-2897 WORD COUNT: 113 .

The facility, if approved by Canada's Atomic Energy Control Board, would take fuel from all eight units from 1994 until about 2006, said Peter Stevens-Guille, head of radioactive materials management at Ontario Hydro. It would be comparable in scale to the MRS facility that the Department of Energy hopes to build in the U.S., containing some 700 "dual purpose casks" loaded with nearly nine tons of spent fuel each. "The important difference between those and other containers is that we are licensing these for transportation" according to IAEA requirements," he said, adding that this will allow the spent fuel to one day be shipped to a permanent disposal site without the need for repackaging.